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MODERN INDIA;

WITH

ILLUSTRATIONS

OF THE

RESOURCES AND CAPABILITIES

OF

HINDUSTAN.

48614

BY

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ILLUSTRATIONS

OF THE

RESOURCES AND CAPABILITIES

OF

HINDÚSTAN.

CHAPTER I.

Habits of the natives—Mode of life—National character—No middle class of society—Neglect of works of public utility—Town duties—Native prejudice and superstition—Fairies.

THE people of Hindústan are frugal and primitive; their pastoral habits being nearly the same as they were in the time of the patriarchs of old: no one can travel through the country without having the many beautiful allusions to the ancient manners of the East which are scattered throughout the Old Testament forcibly recalled to the mind. They live, as their forefathers did, on corn, and milk, and oil;—only a few touch the flesh of kids, goats, or antelopes. From day to day and year to year, the same materials consti-

tute their diet. The great mass of the community only eat once in twenty-four hours; but the time varies,—some choose the morning, others the evening: and all are interminable smokers.

With the people of Lower Hindústan rice is the chief article of food; but the inhabitants of Central India, and the athletic tribes of the northern provinces, subsist entirely upon wheaten cakes. These cakes are unleavened, and are prepared at the time in which they are consumed. The meal of which they are composed is prepared at home, or purchased from the corn-chandler. When the hour for the diurnal repast arrives, a small wood fire is kindled, and over it, supported on bricks, or baked mortar, is placed a round iron platter. While this utensil is warming, the individual busies himself in kneading, in a brass pan, the dry flour into a consistent paste, using for this purpose water mixed with a small quantity of buffalo butter and salt. Having completed this process, portions are detached and fashioned into cakes, about a quarter of an inch in thickness. These are laid, one after the other, on the hot iron to be baked, and, as soon as twelve or fifteen are accumulated, the manufac-

turer pauses. Especial care is always taken to prepare more than would suffice for the meal; for, without the satisfaction of knowing that a surplus remained, should it be required, half the gratification of the entertainment would be lost. By placing the cakes on the hot iron, the surfaces quickly get browned, while the interior retains its moisture.

Should the person be provided with chillies, or any other variety of vegetable, they are placed in a small brass vessel, water being poured over them, and set beside the fire to simmer. The potato, which has been cultivated in India during many years for the supply of the English residents, is now beginning to be used by the natives.

The baking process over, the repast commences. The piquant contents of the brass cup are poured into a dish of the same metal, and some buffalo butter into another. Each morsel, as it is torn from the cake, is slightly dipped in the vegetable mixture, or the ghee, and eaten. When the meal is concluded, every vessel is most carefully scoured and put away. A chillum of tobacco then follows; after which, should the individual be more luxurious than his neighbours, he indulges in the gratifi-

cation of a short sleep. Two or three hours are consumed from the time of the commencement ofthe proceeding to the conclusion of the repast. The corn is ground in a hand-mill, and is particularly salutary, in consequence of the bran being mixed up with it.

Having said thus much concerning their mode of life, I next proceed to offer some remarks on the present condition of the national character; and, bad as every one must allow it to be, I do not consider it deserving that unqualified censure which has been so lavishly heaped on it. With every respect for the authority of so great a name as Mill, I must say, that the conduct which has given occasion for the severity of his remarks, is not so much attributable, as he would lead us to suppose, to the inherent bad qualities of the mind of the people themselves, as to the selfish and unhealthy form of government under which they have been nurtured.

He tells us, that "in a more favourable state of the human mind, that large portion of the field of action which it is impossible to reach with the terrors of the law, is protected by the sentiments

of the people themselves; but in India there is no moral character. Sympathy and antipathy are distributed by religious, not by moral judgment. Ignorance, and its concomitant, gross superstition, an implicit faith in the efficacy of prayers, charms, and magic; selfishness, low cunning, litigiousness, avarice, revenge, disregard for truth, and indolence, are the principal features to be traced."

I have before remarked on the inconsistency of the native character, and adduced two opposite examples in illustration. Certainly the trait developed in the one instance must be esteemed one of which an English fisherman might have felt proud, and yet honesty would be the last virtue we should look for in a people possessing so long a catalogue of bad qualities as those which have just been enumerated. Such a state of things can only be understood by persons acquainted with the tyrannical nature of the past governments of Hindústan, which, during many centuries, have presented one continued scene of discord and anarchy, with all the vicissitudes and fluctuations which must ever be found as their attendant evils. In the outrageous violations of law and justice, perpetrated by the

strong against the weak and the defenceless, every crime called into action some animal propensity; and, in the constant indulgence of brutal passions, moral sentiments were lost. Conquest formed the first and only legitimate pursuit of the sovereigns; even the ties of blood and kindred were insufficient to restrain them in a career which they regarded as the sole source of glory and renown.

Ambition, when once kindled in an Asiatic breast, breaks down every fence. Internally the constitution of a native state is a single despotism; every movement originating with the chief, to whose will there is no limit, except the endurance of his subjects. Schooled in such an atmosphere, the thoughts of the whole community were necessarily centred in the present. They held every thing they possessed upon a precarious tenure, and they could place no dependence on the future; while self-aggrandizement was so glaringly prominent in all the acts of their superiors, that at last the people themselves necessarily became tainted with the vice.

The great bulk of the population could entertain no attachment to any set of political principles

grounded on such a basis, or to a form of government, which, however good, might, in the succeeding year, be destroyed by the usurping hand of some successful neighbouring despot. They have in this manner been long habituated to revolutions, and partial changes, and have, consequently, learned to obey with little repugnance whomsoever may happen to be placed over them, expecting that his sway, like that of his predecessor, will be equally transitory. All they wish to stipulate for is, the toleration of their religious doctrines, rites, and prejudices, the security of their domestic comforts, and the prosperity of their particular villages; but at the same time they are perfectly indifferent respecting the person who may appropriate the revenues, being altogether destitute of what is understood in Europe by the term patriotism.

Under such circumstances, we must not feel surprised to find that the people of Hindústan do not regard the crime of treason in the light in which it appears to us. The man whose salt they have eaten, they will never betray. In fidelity and attachment to a master or chief in whose service they are engaged, the natives of India are not surpassed by

any people upon earth; but in the relation of mere subjects, they do not feel themselves bound by any strong tie of allegiance. They have no idea of loyalty or disloyalty, but to the masters who support them; and their notions run equally counter to those entertained in Europe concerning civil liberty. Amidst the numerous revolutions which have at various times prevailed in Hindústan, it is a remarkable fact, that in all the schemes of polity, whether of the conquerors or the conquered. the idea of civil liberty in any shape never seems to have been contemplated, and is to this day without a name in the languages of India.

Our native army, as long as it shall continue to enjoy the liberal advantages it now possesses, will never falter; and, we may rest assured, will stand the shock of any contending force that may be brought against it. The bad qualities of the heart, therefore, which we now see so prominently displayed in the Asiatic breast, must be attributable to the constant action in which the passions of the people have been kept by their former rulers. That under the mild and steady sway of British rule their wild and lawless inclinations will be suc

ceeded by milder and more refined sentiments, few who have studied the native character can doubt; and we may with confidence predict, that, in the course of another century, the people of India will have become equal in wisdom and in excellence to any of the models which shall be held out to them.

The main objection to the employment of the natives of the country in offices of trust and responsibility, arises from their notorious habits of dishonesty and peculation: but it should be recollected, that it is only since the European functionaries themselves have been well paid that they have become trustworthy, notwithstanding their high moral superiority and intelligence. The early history of our rule in India teems with European acts of corruption and malpractices. Therefore, so far from feeling surprised at a native officer being guilty of similar conduct, our astonishment ought rather to be called forth by his not doing it. All European governments have purchased integrity in high public officers by honours and emoluments. To procure it in India, the Company were necessitated to adopt the like policy; and, if the same

price be given, we shall almost as readily find it among the natives of the country as among the Europeans themselves.

"To improve and persuade those around you," said the noble Hastings, in his impassioned address to the students of Fort William-college, on the 25th of August, 1820, "will not be a gratuitous duty, superadded to the discharge of your immediate trust respecting your honourable employers. The simple interests of the Company cannot be better advanced than by the moral melioration of the inhabitants; but, far beyond this, the Company have not, never could have, another object so much at heart as the happiness of their native subjects, and the reputation of their own country." Then, turning to the civil students, he added, "The possible calls on your justice, your sagacity, your firmness, your exertions, your patience, and your kindness, might be impracticable to communicate; but every man ought to have a short summary of what becomes him. When appeals for your intervention occur, it will be sufficient if each of you say to himself, 'The indigent requires a sustaining hand, the dis-

tressed requires soothing, the perplexed requires counsel, the injured requires redress: they who present themselves to me in these predicaments, are my fellow-men, and I am a Briton.'"

In India there is no middle class of society: with the exception of a few bankers and shopkeepers, there is no intermediate grade between the prince and the pauper. At present nine men in ten, or perhaps ninety-nine in every hundred, have nothing but their mental and physical powers to depend upon for subsistence; and, yet the effect of our system of rule hitherto has been, unhappily, to diminish the employment of these. Persons who have no other resource, and who find it difficult to procure suitable occupation, cannot be supposed to be much attached to a government which refuses to encourage the exercise of their talents in the undertaking of honest and useful employment.

The dedication of revenue, for the creation and support of a middle class in our Eastern dominions, has been, with few exceptions, utterly neglected. It is only in the territories of independent native chiefs and princes that great and useful works are formed or maintained. In our territories, the

canals*, bridges, reservoirs, wells, groves, temples, and caravansaries, the works of our predecessors, from revenues expressly appropriated for these undertakings, without any view to a direct return in profit, are going fast to decay, together with the feelings which originated them; and unless a new and more enlightened policy should be followed, of which the dawn may perhaps be distinguished, will soon leave no trace behind.

"A persistence for a short time longer in our selfish administration will level the face of the country, as it has levelled the ranks of society, and leave a plain surface for wiser statesmen to act on. At present the aspect of society presents no middle class, and the aspect of the country is losing all those great works of ornament and utility with which we found it adorned. Great families are levelled, and lost in the crowd; and great cities have dwindled into farm villages. The work of destruction is still going on, and unless we act upon new principles it will proceed with desolating rapidity. How many thousand links by which the affections of the people are united to the soil,

* The restoration of the Delhi canals forms an exception.

and to their government, are every year broken and destroyed by our selfishness and ignorance; and yet if our views in the country extended beyond the returns of a single harvest, beyond the march of a single detachment, or the journey of a single day, we could not be so blind to their utility and advantage." *

By our disregard to the promotion of this valuable portion of a statesman's duty, the middle class of society, which existed in the time of the Mahomedan rulers, has now disappeared. If the Native Powers were tyrannical and oppressive, they were attentive to the policy which creates and engenders among nations an attachment to the soil that gave them birth. They encouraged and co-operated in the planting of extensive mango groves, so much delighted in by all classes; they promoted the erection of temples, they assisted in the formation of reservoirs, and at intervals so tempered their oppression by concession as to retain

* See a valuable paper on this subject in a work entitled "Taxes;" by an officer of the Civil and Military Service of Bengal.—Smith and Elder, London.

within the breast of their subjects sentiments of gratitude and attachment.

So far from acting on these principles of policy, we have almost in every instance pursued a contrary course, severing the ties it should have been our urgent desire to strengthen. By our Revenue management we have shaken the entire confidence of the rural population, who now no longer lay out their little capital in village improvements, lest our revenue officers, at the expiration of their leases, should take advantage of their labours, and impose an additional rent.

The English at home are so much in the habit of giving their attention to matters connected exclusively with manufactures and commerce, that they have hitherto neglected, in their distant possessions, those great works which, when spread over the face of a country, convert the barren and cheerless waste into scenes of rich and animated fertility; peopling tracts which, without them, man scarcely dared to enter.

With regard to Hindústan, those nations who are unfriendly to us, might with justice declare our

conduct to be more allied to Vandalism than to civilization. With the exception of the beautiful—the stupendous edifice at Agra, not a single ornamental work out of the immense number raised by our tasteful predecessors, have the Anglo-Indian government had the liberality to keep in repair; and it need scarcely be said, that they have not raised one upon their own account. Burke's severe rebuke still holds good: "That if the English were driven from India, they would leave behind them no memorial worthy of a great and enlightened nation; no monument of art, science, or beneficence; no vestige of their having occupied and ruled over the country; except such traces as the vulture and the tiger leave behind them."

It is argued by many, that individual enterprise is sufficient for the furtherance of these great ends. Such reasoning may be applicable and just to communities far advanced in civilization, in which commerce, manufactures, religious orders, judicial establishments abound; and where armies, navies, colleges, and schools, fill up the vast chasm between the prince and the peasant, creating as long as they endure a permanent middle class; but is

totally inapplicable to India, and indeed to all those states of society in which industry is almost exclusively confined to agriculture, and the material enjoyments of the people limited to the simplest necessaries of life.

"It may be urged," says Forster, "that the expenditure of Europeans in their public and private buildings, has adequately supplied the wants of the artisan and labourer. But I am led to hazard an opinion, that this amount falls far short of that applied by the preceding princes to the construction of mosques, baths, temples, grand reservoirs of water, spacious gardens; together with a variety of costly private edifices. These modes of expense are neither adapted to the genius nor inclination of Europeans, who have no religious passion to gratify, nor are they impelled by patriot zeal to raise monuments of grandeur in India: but holding themselves the moveable tenants of the day, they are eager to reach their native home, that they may there enjoy the fruits of their labour."

I have heard it asserted by one fully competent to give an opinion, that the artificial reservoirs

of India available for purposes of irrigation might have been, and may still be, made an admirable means for the formation of a middle class.

Intent only upon augmenting its net surplus revenue for the benefit of the absentees in England, without for a moment considering the sources whence it may be expected to flow, the Anglo-Indian government seldom venture to incur any great expense for such useful purposes. Every statesman must see, or ought to see, the necessity of a middle class in society, who should be interested in the stability of the government: and every statesman has the power to form one, when he has the resources of a vast empire like India at his disposal. Take, for example, an instance furnished in the history of our own country.

We abhor the character of Henry I. of England, in the relation of a brother, but as a sovereign we must recognize in him the first enlightened statesman that ever filled the English throne. When he seized the treasure, and assumed the sceptre, on the sudden death of his brother Rufus, his elder brother and rightful sovereign, Robert, was away, engaged in the holy wars. Henry

knew that Robert was the most popular soldier in Europe, and that he was leading armies in the most popular cause.

He also knew that the great mass of the people were without property, and were seeking in the service of every bold adventurer employment for their swords. Henry saw that, without an immediate change in the system of society, his brother's standard if displayed, in any corner of England, would cause his usurped authority immediately to disappear. His only hope rested upon a change in the state of society; how to act was the question.

He knew that the slow progress of arts, trade, manufactures, and commerce, could not effect it in time for his purpose; could not, in short, by the creation of property, produce that feeling of interest in the stability of his power which he immediately required. His sagacity pointed out the means of effecting an instantaneous change, by the formation of Ecclesiastical establishments. Abbeys, priories, monasteries, and other religious houses, depending for their very existence upon the stability of his power, rose, as it were by enchantment, in every corner of his dominions. One hundred and

fifty, we are informed, of these religious foundations were raised by him; and these gave honest employment to tens of thousands, together with property and hope to as many more.

Five new orders were introduced into the country: Knights-Hospitallers, Augustine Canons, Cistercians, Canons of the Holy Sepulchre, and the Monks of Grandmont; and amongst a formidable host of priests, and a rabble actively and profitably employed, Robert, the most popular soldier of Europe, returned from the Holy wars unnoticed; and lived more than twenty years neglected and forgotten, a prisoner in the country of which he was the rightful sovereign. The middle class, which Henry's *policy*, not his *religion*, formed, was the best which the circumstances of the age permitted for an immediate purpose; and the security of the property, and even the existence of almost every member of that class, depending upon the stability of his power, Robert could have had no chance had he contested his right.

The policy of the Anglo-Indian government has been on all occasions to arrest every local disbursement, and to gather into the garners of its

treasury all that it can scrape together. Some years ago, throughout the different cities and towns in British India, a municipal tax was imposed, under the denomination of town duties; and upon a remonstrance made by the inhabitants against it, they were assured that the measure was merely adopted in order to raise funds whereby each town and its neighbourhood, wherein the tax should be levied, might be improved and ornamented; that by this means many extensive and useful improvements might be made, which could not be effected by single individuals. With this explanation they were satisfied.

During a considerable period the funds were principally applied to this legitimate purpose, and at the large town of Saugor, in Central India, for instance, an extensive façade was constructed, with a flight of stone steps extending into the beautiful lake, on the borders of which the town stands. A wide and excellent road, six miles in extent, along the margin of the lake, was planned and executed; which gave employment during many months to a great number of people. This road has been planted on either side with mango and choice forest trees,

which, when mature, will afford a delightful retreat from the burning fierceness of the solar rays, and vie in appearance with the beautiful avenue which extends between Calcutta and Barrackpore, or the more extensive and elegant *chausées* of France. New streets were projected, and the old ones widened. These and many other undertakings of equal utility were projected when the late ruler of India arrived.

It is difficult to say under what stipulations Lord William Bentinck came to India, and it would be highly presumptuous to hazard an opinion respecting the correctness of his Lordship's views. I merely adhere to facts and events which took place immediately after his entrance into the country. No sooner had Lord William placed his foot upon the soil of India, than, in spite of all remonstrance, he commenced upon, and persevered in those invasions of prescriptive right which have led to such severe and cutting animadversion.

One of his first measures was the appropriation of the whole of the town duties. Peremptory orders were issued that all works of local utility should be suspended, in whatever state of comple-

tion they might be, and the money for the future paid into the government treasury. Among the other useful purposes to which the town dues at Saugor had been applied, was the establishment of a Dispensary, at which the sick poor might obtain relief—the surgeon of the station kindly giving his professional services gratuitously. The whole expense of this establishment amounted only to 30 rupees (£3) per month.

An appeal was made on behalf of this Dispensary, as well as the one at Jubbulpore, another town in the Saugor and Nerbudda territories, but to no purpose. A positive negative was given to the application, and that in such uncourteous terms as to leave an impression on the minds of the local officers, that his Lordship almost thought that they were endeavouring to overreach him. Every public work of local utility, then, which led to the employment of mechanics and labourers has been abolished; and the inhabitants of Saugor, although regularly called on to pay this municipal tax, no longer derive the smallest benefit from it.

To come back to the present state of the Hindú and Mahomedan mind. The light of

other days still continues to illumine their intellectual atmosphere. They are centuries behind us in social and religious civilization—but it is consolatory to know that the dawn of a more cheering era is evidently fast approaching. The impositions of their religious guides still rivet them to the most implacable prejudices, and impel them to the commission of fearful outrages on the milder charities of our nature. We shudder at the idea of a fellow-creature passing by without heeding the dying wants of another. But when we know that the force of public opinion is against his doing so, unless the individual should belong to his own class, however severely we may condemn the conduct pursued, we must not attribute it so much to the inherent bad qualities of the native mind, as to the influence of education and the force of public opinion. The parable of the Good Samaritan establishes the universality of the feeling.

No people on earth are so infatuated as the Hindús with the notion of magic. We cannot feel surprised at this, since it has been the offspring of ignorance in all ages, our forefathers being equally under the influence of the grossest superstition.

Uninformed persons can scarcely conceive anything to have a real existence that is not made an object of their senses. At no time have mankind been able, without the aid of revelation, to form an adequate idea of a First Cause, which is the great foundation of true religion. In proportion as their knowledge of nature was confined, and their theoretical conclusions imperfect, with so much the more avidity did they fly for satisfaction to the most simple but most ineffectual of all solutions—*the corporeal agency* of invisible beings. Hence we find them fully prepared for, and readily falling into, all the follies and absurdities of superstition. We must not wonder then that where such infatuation exists, advantage should be taken of it by the cunning and the crafty. Accordingly, Hindústan is overrun by professors of those mystical incantations called Mantras, and the occult sciences generally. Those who deal in the former of these two acquirements are considered the most skilful, and at the same time the most dangerous.

The greater part of the cross accidents in life which befal the people, are supposed to be caused by the secret machinations of some enemy who ha-

had recourse to this black art for the purpose of circumventing them. If they lose a wife or child by premature death, when their corn is blighted, or a murrain breaks out among their cattle, none of these calamities are attributed to a natural cause, but are all ascribed to preternatural devices, employed by some secret enemy. Diseases, particularly such as are of long continuance, are attributed to the same cause; and if these occurrences should happen during any quarrel or law-suit, the whole is attributed to the opponent, who is considered to have accomplished it by magical devices. For the first twelve months a Hindú mother carefully secludes her child, lest the evil eye should fall on it.

These mischievous magicians are very much dreaded and hated, and never fail to be punished when it is believed that by their spells they have been instrumental in promoting any calamity. Taking further advantage of the credulity of their countrymen, these vagabonds give out, that in the utterance of their mantras the utmost nicety is required; since in the correctness of their pronunciation depends the pleasure of their god or demon;

while any imperfection or defect that occurs infallibly brings on the head of the utterer all the mischief he was essaying to procure for others. The punishment assigned to them, generally, is, to draw their two front teeth, as their loss will for ever afterwards render them incapable of correct utterance.

As an instance of the hold which these men sometimes obtain over the minds of their countrymen, the following anecdote, which fell within my own knowledge, will serve to show. A highly respectable Hindú landholder at Saugor, named Baboo Bight, refused one of these men a plot of ground for a garden. Of the motive for the denial of this request I am ignorant, nor is it a matter of any importance. It is sufficient to state, that the fellow received a refusal. Undismayed, he renewed the application, which was again rejected. He became more importunate than ever; and a third time solicited the grant, but met with no better success. He vowed, in consequence, to conjure the life of the landholder away within a year, and made the Baboo acquainted with his intention. From this moment he commenced the

diabolical undertaking; but the Baboo, being in good health at the time, took no notice of the threat.

The fellow established himself on a plain close to the military cantonments of Saugor, on the confines of Baboo Bight's land. Every evening the incantations would be resumed, and the fire be seen blazing about the mystical earthen pot. Days and weeks passed on with apparently no effect. At length it was given out that Baboo Bight was ill. His sleep had deserted him, his appetite was gone, and he had become restless and feverish. He affected to treat the threatened machinations with contempt; but it would not do: they were evidently uppermost in his mind, and making a deep impression. Six months or more had elapsed, and the fellow continued unremitting in his acts of conjuration. Baboo Bight's health was gone; a low destructive fever had insinuated itself into his system, and it was evident that he was fast approaching the grave. The fellow, more vigorously than ever, stirred his fire and invoked his deity, till at last the poor man died.

Thus, by the operation of fear, in less than

twelve months a mind active and strong became disturbed and anxious, then diseased, till at last, by the influence of this wretch's slow but sure mystical incantations, life was juggled away, and lost.

Moreover, the Hindús are great believers in fairies. Here we find a strange similarity between their notions upon the subject and those of the people of Europe; but as many learned inquirers believe that the fictions concerning fairies which prevailed in England were of oriental importation, their resemblance to the place of their origin may be satisfactorily explained. Our brethren of the crusades are the individuals, according to an ingenious writer,* to whom we ought to feel grateful for so valuable a present.

Another †, equally curious authority on the same subject considers the precious gift to have been introduced into England long before this irregular impulse of religious frenzy on the part of our forefathers had been exerted.

The race of fairies, he informs us, was established

* Jarvis's Don Quixote.

† Martin's Spenser's Fairy Queen.

in Europe in very early times, but not universally. The fairies were confined to the north of Europe—to the *ultima thule*—to the British isles—to the *divisis orbe Britannis*. They were unknown at this remote period to the Gauls and Germans. The belief, indeed, of such invisible agents being assigned to different parts of nature prevails at this very day in Scotland and Danmonium (Devonshire and Cornwall). In the latter, we know that the Druids worshipped rocks, stones, and fountains, indeed anything with an artificial scratch on it, like our Hindú brethren in the present day; and imagined them to be inhabited and actuated by divine intelligences of a lower rank. These notions have been regularly transmitted from father to son, down to a recent period, and are much anterior in date to the spurious romance of those Quixotic expeditions in the cause of religion, called crusades.

These inferior deities, which the Cornish called *Spriggian*, or Spirits, the Hindús call *Ghins*, which answer to Gean, or Fairies; and the rural population of Cornwall may still be heard to discourse of them. The *Spriggian*, like the *Ghins*, are

believed to delude benighted travellers, to discover hidden treasure, to influence the weather, and to raise the winds.

Education in the western world has, however, now happily dispelled the mists which had so long clogged the understanding; and there can be little doubt that the dawn of an equally bright intellectual day has broken on the minds of our fellow-subjects in the East.

CHAPTER II

Departure for Central India—Painful Associations—Humeerpúr—Meeting with a Fellow-Traveller—Table Land of Central India—Alarm during the Night—Surprise a Village—Catch a Man—Attachment of a Pariah Dog—Anecdote of a Child—Arrival at Saugor—The Cantonments—Burial Ground—The Mint—Improvements at Saugor—New Process in Road-making—The Queen—Pundits—Artisans—Native School—Attention of the Governor General—Lake—Amusements.

After a residence of three years at Cawnpore, I was nominated by the Governor General to the medical duties of the Political Agency, in the Saugor and Nerbudda territories. The distance from Cawnpore to the town of Saugor, where I was about to take up my abode, is upwards of three hundred miles. My experience of the delights of a dâk trip in the rainy season had been ample, as the reader may probably recollect, and I was now able to gather information touching one to be performed in the burning month of June.

Montesquieu, I think it is, who says, "the misery

of travelling through a fine country consists in not having some one near to whom to exclaim, How beautiful!" As mine was a journey in the height of the hot winds, I did not participate in this regret, more especially as I could only travel by night. But even had it been otherwise, and had I been a Benedict blessed with "a better half," the unsociable nature of the travelling vehicle would have effectually prevented the enjoyment of that sweet interchange of thought said to be the solace to every care, and the envy and desire of all single men. But boxed up in a machine six feet by four, the solitary traveller jogs along at the slow rate of three miles and a half an hour, over a half wild, half cultivated country, with nothing to diversify the monotonous "He! Haw!" of his grunting companions the palankeen bearers, save the occasional caw! of a crow as he approaches a village, or the squeel of a kite or vulture disturbed from some neighbouring carrion. Two sets of bearers will never run any distance with their palkees side by side, so that if a man should have a beloved wife with him, she is sure to be either half a mile behind (perhaps looking after the Ayah with the

dear infant), or an equal distance in advance. Under these circumstances, lucky is the man who can travel through Hindústan free from a fit of the blues.

On this occasion my route lay through a country I had already traversed, so I set out on my journey with all the feelings of an old stager; one who, from a few hard rubs, fancies himself a perfect master of the road and an adept in the knowing ways of mankind. To travel by day through Upper Hindústan in the early part of the month of June is utterly impossible. By eight o'clock in the morning the sun has attained a power scarcely bearable; night then becomes the only season at which an European can move. My task required five nights for its performance; getting shelter during the day from the intense heat as I best could. The first night would bring me to Humeerpúr on the Jumna—four stages, 49 miles; the second to Keitah—five stages, 64 miles; the third to Chatterpore—five stages, 62 miles; the fourth to Heerapore—six stages, 64 miles; and the fifth to Saugor—five stages, 59 miles.

Having delivered the charge of my Staff duties

over to my successor; made the necessary P. P. C. calls; and taken leave of some worthy friends, at whose house I spent my last day, I jumped into the palankeen at six in the evening, and bade adieu to Cawnpore. How differently did I feel when I again visited it! Then worn down by a long fever to a state of childish feebleness; now, under the animating—the heyday influence of expectation, and blessed with the gayest spirits.

It is always painful to utter the word farewell, and more especially in Hindústan. The tenure of life is there so precarious that feelings of apprehension suggested by the numerous chances which may prevent our ever meeting again on this side the grave, come upon parting friends with double force: attachments too are stronger than they usually are in the mother-country. In India there is a warmth and real sincerity of feeling that is rarely experienced at home. With the Anglo-Indian, the selfish alloy of worldly consideration seldom, if ever, poisons the cup of generous benevolence, or damps the ardour of warm-hearted hospitality. In him the beautiful lines of Lieutenant Holman ever meet with a ready approval:—

" There is in friendship as in love, a joy
Dear to the heart of every feeling man.
A joy that flows with less tumultuous power,
But gently warms and animates the soul."

My first night was passed, as first nights in a palankeen usually are, that is, in vain endeavours to *catch* a little sleep, till the grey flickerings of early dawn bring along with them a momentary coolness in the air, which tranquillizes the fevered system into something like repose.

I reached my friend's house at Humeerpúr soon after eight. I was in sight of it long before, but, as is often the case, was detained a considerable time in crossing the Jumna. The palankeen was now stowed away in the verandah, and myself comfortably housed for the day. After breakfasting, and talking over all our adventures since we last met, Dr. S. and myself called on the Representative of the Governor General for the affairs of Bundlekund. We spent the greater part of the day at his residence, and only left it about three, to make our toilets previous to returning to dine. In the evening the ladies favoured us with some delightful music, from which I was obliged to tear myself, to resume my hot and dusty journey.

The termination of the second night brought me to my old station Keitah, 64 miles, where I was made welcome at the house of an old and esteemed friend, who had, I found, invited some of my former acquaintance to meet me in the evening at dinner, where old scenes and adventures, the recital of which stole away the time, and gave gusto to the refreshing claret, made us forget the discomforts of the burning atmosphere, and restored to their former standard the half-drooping spirits of all. Night was fast upon the wane ere the last vehicle was heard driving off from the door. I spent the following day at Keitah, and at six o'clock in the evening started for the scene of my former exploits, Chatterpore, 62 miles.

In the description of my residence at this place, I mentioned having occupied the travellers' bungalow, which now, for a second time, became my temporary resting-place. As I drew near to it, and was anticipating a long and dreary day, to my delight and astonishment I found a fellow-traveller already in possession. Lieutenant M. had arrived only a few minutes before me. He came from Saugor, and this was his second day. Instead, therefore, of the

loneliness which each expected, we contrived to accommodate ourselves to circumstances so well that the hours slipped by, and the moment of departure arrived before any irksome feeling was permitted to arise.

As soon as it was known that I had arrived, many of the townspeople came out to visit me, bringing with them the usual offerings of fruit and spices. Among the number I recognized several of my old acquaintances, who gave me the particulars of their goings-on in the health department since I had least appeared amongst them. The Rajah, they told me, since the death of his son, had been residing at Malarah, a place of his, about ten miles from Chatterpore: that matters remained in *statu quo*, and that the trade of the town continued as flourishing as ever.

At sunset we smoked our last cigar, and having finished the remainder of a bottle of claret, with mutual good wishes for each other's welfare, we resumed our respective routes. Mine conducted me to a second post-house, but not half so good as that at Chatterpore, at a place called Heerapúr, 64 miles. To make the place bearable, I

had requested my relative at Saugor to send out some men with *kuss kuss* tattees, to place in the doorways, in order that the air inside might be rendered supportable. Lieut. M. told me that they had been put up, and from the moment he mentioned the comfort which he had derived from them, especially, as he said, they were totally unexpected on his part, I felt a misgiving that all would not be right when I reached my temporary abode; and so it turned out. The men mistaking one *Sahib* for another, thought their work completed when they had finished their task of ministering to the wants of Lieutenant M. So they quietly packed up their portables, and returned back to Saugor. The consequence was, that when I came up, about twelve the next day, I found the place without a door, and the little room with a cow for its occupant. The latter was soon dislodged, but I did not remain there long. Fortunately for me, a considerable change had taken place in the weather during the night. Clouds had gathered overhead, and being now on the table-land of Central India, the atmosphere was more elastic and fresh than in the plains of Bun-

dlekund. I had ascended the Heerapúr Ghât or Pass during the early part of the morning, and was no sooner on the summit than the change of climate became very perceptible.

During my nocturnal peregrinations, I sustained considerable annoyance on account of the ignorance of the palankeen-bearers, who contrived to lose themselves in the jungles, which in the neighbourhood of Golgunge, where the accident occurred, are very thick and extensive. Suspecting that all was not right, from a subdued tone of conversation which I overheard going on, I called out to know what was the matter, and at the same time throwing open the palankeen-doors, I found myself on the brink of a precipice looking down on a piece of water. This, as might be supposed, rather startled me for the moment, especially as I was so close that there was not room to get out on the side nearest the lake; further inquiry discovered to me that they had lost their way. Whether wilfully or not I cannot pretend to decide. As they were now obliged to scramble through bushes without the vestige of a road, I thought it better to get out and walk. After roaming about for some time, we at

length fell in with a footpath, which soon brought us into the precincts of a few huts. The bearers, aware of the tricks of their countrymen, no sooner espied the thatch of these miserable dwellings than they took safe measures accordingly. A dead silence was immediately proclaimed, and two cautiously stole forward, leaving the others, with the palankeen and torches, behind.

My curiosity prompted me to accompany them, as I felt anxious to witness their plan of operations. We wended our way cautiously along the path until we came close up to the huts. All was as still as death. Not a breath of air was stirring, and the inhabitants, if there were any, were evidently buried in a sound repose. At first we could perceive no one; but on turning a corner we came upon a stout fellow, fast in the arms of Morpheus, stretched outside the door of his hut on his wooden bed-frame. To spring forward and catch hold of him was but the work of a moment. Immediately as the two men had secured their prize, they shook him well, and called out lustily. On awaking, the poor fellow seemed to think that it was all over with him, and that his career in this

life was soon to close; but on getting his eyes fairly open, and learning our wishes, he found his condition not quite so pitiable as he at first imagined. Accordingly, he began to consider how he could out-manœuvre us in return. Had we advanced with a noise, so as to have disturbed the sleeping community of this rural spot, we might have searched in vain for a living mortal to direct our steps. Every moving thing would have disappeared among the jungle. To obtain a guide, therefore, it was necessary to pounce upon them unawares in the manner we now did. Having secured our man, we acquainted him with the place of our destination, and desired that he would prepare himself to accompany us until we should regain the road. He yielded to our proposition with a very bad grace, and hoped to elude our vigilance by practising on us an old and well-known trick. He solicited permission to be allowed to go into his hut to fetch his shoes. A request exceedingly natural, and one to which a person less conversant with native practices than the present party were would have readily yielded.

Had we acceded to it, however, we should have

waited in vain for his return, and this the bearers well knew; every jungle hut being provided with a hole in the back wall, sufficiently large to admit of the inmates bolting, in cases of emergency; and had he been permitted to enter, he would doubtless have considered his present position so far critical as to justify his availing himself of such a convenient mode of escape. When the proposal was therefore made, one of the palankeen men exclaimed, "Rascal!" (or something worse, for they are by no means sparing of abusive epithets among themselves) "do not think to come the chor kirkhee (thief's hole) over us, we will find your shoes for you." Whereupon one of the party darted into the hut, and, under the direction of the disappointed proprietor, soon found the [illegible] wala's primitive sandals. The rest of our party, as soon as they learned by our voices that we had caught a man, came up with the torches and palankeen.

Having again explained to our captive the direction in which we wished to go, we then set out, having him carefully guarded as we went along. In about an hour the man brought us into the

high road, when he received a rupee for his trouble, and was sent back to his village. This proceeding may appear very harsh and unjustifiable; but when circumstances arise, as in the present instance, in which the services of these half-civilized creatures are required, there seems to be no mode of obtaining them excepting by the recourse to measures which are assuredly oppressive, but for which necessity must plead an excuse. All the talking in the world would never induce a native of this description to undertake a task of his own free will; and so accustomed is he to this sort of cavalier treatment, that he looks for it from any individual who really stands in need of his assistance. With him, as with all mankind, there must be a stimulus to the drudgery of daily work, and that stimulus is necessity. "Go and catch (pucharlao) so many men," is the every-day mandate pronounced from the lips of a master who requires workpeople; and unless they are caught, good-by to the work for the day, as a jungle wala will never attend of his own accord.

When we reached the post-house I gave the head man a sound rating, for sending out such

incompetent and careless people; and the bearers themselves, had they not run off, would in all probability, instead of the usual present of half a rupee which all dâk travellers give them, have experienced the effects of my indignation.

A singular instance of attachment on the part of one of those numerous country (pariah) dogs which infest all parts of Hindústan occurred to me in this journey. I first fell in with the animal shortly after I quitted the town of Logassee, in Bundlekund. The day had then broken, and supposing the dog belonged to one of the palankeen men I took no further notice of him. On reaching Chatterpore, however, I found that he still accompanied us, which led me to inquire whether he was the property of any of the party. The reply was in the negative. As the poor animal had come so far with us, it was only fair to give him l[illegible]-room, so I permitted his resting in the same apartment with Lieutenant M. and myself. A portion of our scanty meal was all he had to eat. On setting out in the evening the animal was again on the move, and kept beside the palankeen the whole of the night, till we reached the Heerapúr dâk bun-

galow, the next day at twelve; having been our companion throughout the whole of the nocturnal wanderings in the Golgunge jungles.

We had now been in company together upwards of sixty miles, and with the exception of a few small biscuits the creature had tasted nothing. At Heerapúr he bore evident signs of exhaustion; no sooner had we entered the hovel than he threw himself on the ground, panting violently. I procured some water from a boy of the village, which, when placed before him, was eagerly lapped up. My stay, as I have already mentioned, was a very short one. I did not get in till twelve; and the air being cool in comparison with the previous day, I started again at two. The dog, notwithstanding his fatigue, also got upon his legs, and seemed determined to go on. He kept up for about five miles further, and then giving me a look, which seemed to ask for sympathy, and which I shall never forget, dropped in the rear, and lay down. Of course I soon lost sight of him, and being very far from any habitation, I very much fear the poor creature must have died.

While at Heerapúr a little boy came running

up to me with a young grey monkey which he had just caught; and being very desirous that I should accept it, or, in other words, buy it—as it is not the custom of the country to demand a price in offering anything to a gentleman; it being deemed more decorous to solicit its acceptance as a present, and trust to his generosity for a suitable reward. This practice sometimes entails upon an Anglo-Indian considerable inconvenience; his ideas, and those of the donor's, being frequently widely different respecting the intrinsic value of the article; and when the former thinks that he has made a handsome acknowledgment, the latter may be altogether disappointed. In the case of my little friend with the monkey, I gave him a rupee or two, which seemed to more than realise his expectations, and he ran back to his parents, apparently quite pleased.

The approach to Saugor in the dry season does not impress a stranger with a strong predilection in its favour. It is surrounded by a ridge of flat trap hills, with nothing upon them excepting dry and stunted grass, which contrasts strongly with the black soil on which it grows; as soon, however,

as the traveller mounts the hill on which the Residency House stands, his eye rests on a charming lake, with the native town enveloped in trees on the one side, and rich undulating plains on the other. The military cantonments are situated on a part of the latter; extending in a continuous line about a mile and a half. The ground selected for these cantonments is in many parts low and swampy, and ill adapted for the purposes for which it is designed.

The parade-ground ranges along in front of the lines, and throughout its whole extent is only intersected by the European burial-ground. I myself highly disapprove of the selection of such prominent sites for the graves of our departed comrades. The more secluded a place of this kind can be, the better. There is quite enough depression of a physical nature always acting on the system in a tropical climate, without the aid of so melancholy a scene as that afforded by a cemetery thrust conspicuously before our eyes, and serving to remind us, every moment of our existence, of the deadly nature of the atmosphere, against which we are doomed to contend. I feel

assured, therefore, that the farther these places are kept in the back-ground the better, while so conspicuous a situation as the parade-ground at Saugor should have been the very last chosen for such a purpose. Until lately Saugor boasted a mint: the handsome building constructed for the purpose still remains; but, strange to say, in consequence of the immense sums which have been wasted on the erection of an establishment of the kind at Calcutta, three times larger than the required extent, the Government, in order to bring a greater quantity of grist to their pet mill, abolished the one at Saugor.

This measure is to be deplored upon many accounts, and was certainly unjustifiable, on the score of economy; since the able superintendent of the Saugor establishment during his continuance in office, a period of several years, so far from entailing any expense upon the Government, absolutely realized a profit by his skilful management.

The trifling circumstance of throwing four hundred men out of employ, and of putting an end to all local expenditure in the interior, was deemed of little moment, it seems, in comparison to the

necessity of finding work for machinery, which, without these sacrifices, would have remained idle. Ever since the erection of this extravagant establishment at Calcutta, the enormous expenses which it entails have only been met by the deluge of the country with copper pice, issued at a rate which, in comparison with the intrinsic value of the metal, has offered a temptation to the villagers to exercise their skill as forgers of base coin, and has stocked the gaols with vagabonds under punishment for the issue of this counterfeit money.

The mint at Saugor was calculated to prove more beneficial to the community than any other establishment of the kind. The bankers of the surrounding independent States employed it for the purpose of converting the coin of those countries into the Company's rupees; so that when they required to make advances to the tenants of the British Government they were never at a loss for the proper kind of money. The necessity of this measure will be more apparent when it is stated that the government collectors will only take their own established rupee in payment of the land revenue; and that as many of

the transactions of the people are made with the Bhopal and Bundlekund states, they are obliged to receive the money of those territories in exchange. The seigniorage charged was 2 per cent., and so economically was this establishment managed, that this charge, together with a limited issue of copper pice, more than covered its expenses.

The money being coined on the spot, no expense was incurred, and no danger encountered in the transport of it hundreds of miles over the country, which at present must necessarily be the case; to say nothing of the glaring inconsistency of abolishing so valuable a source of local expenditure, and thus throwing four hundred industrious families upon the stream.*

The principal Civil establishments at Saugor consist, in addition to the gaols, of which there are three, in consequence of this station being the depôt for the reception of Thugs, of the provincial treasury, and the post-office.

The cantonment roads, as well as those about the Civil lines, are extremely good; and being made of materials different from those which usually

* See Appendix.

enter into the formation of highways, deserve especial mention.

The soil of the place is a black rotten mould, with occasional patches of sandstone; and till within the last few years the roads were so wretched as to be in some places, during the rains, perfectly impassable.

At the time in which Captain Sleeman took charge of the district as principal political officer, among his other multifarious duties, he applied his comprehensive mind to the improvement of the roads, notwithstanding his inability to devote any portion of the town duties to so valuable a work. The labour was performed by the convicts. Having instructed an intelligent jemadar of the dismounted police corps, called Nujeebs, in the art, and giving at the same time his own personal supervision to the daily process, highways were formed to the extent of several miles, which were, in the course of a year, equal in excellence to the best Macadamized roads in England.

No stones whatever entered into their formation; they were constructed of basalt, called by the natives *Moormah*. The hills about Saugor are

principally *trap*, though a few are of sandstone formation. The basalt constituting the former is of two kinds: one, a species of green-stone, so hard as to be difficult to work; and the other, soft and malleable. This latter kind is again distinguished by two varieties, called white and black moormah; and the proper admixture of these two sorts of basalt constitutes the art of road-making. Without a due apportionment of each the work would prove a failure; for, if all black or all white be used, the roads would, in dry weather, be impassable from the dust, and in wet seasons inches deep in mud.

The following plan therefore was adopted:—the old lines were enlarged, while the new ones were cut, to the breadth of our English highways: ditches, three feet wide, being sunk on either side, to carry off the water during the floods. A bed of black moormah, from eight to ten inches thick, was first laid on; after which came a thin covering of intermediate moormah, and lastly, a melting of white moormah.

The convicts were furnished with small hand-carts, with which they transported the basalt from

the hills—four were apportioned to each cart. One party worked at the quarry, another transported the materials, while a third disposed of them as they were brought, one policeman being appointed to every four convicts.

Should the weather prove dry on the completion of the work, the moormah continues loose, but never rough or hard, for the horses' feet. No sooner, however, has a shower of rain fallen, than the moisture acts upon the alkaline and calcareous parts of the earth, causing the whole to settle down into a mass, firm, even, and durable. After this, the more it rains the firmer the work becomes; and, consequently, instead of being cut up, as every stone-road is in Hindústan, from the force of the periodical rains, these possess the advantage of remaining unimpaired throughout the most destructive seasons. Since the introduction of this material into road-making at Saugor, a drive may be taken after a torrent to any part of the station without the necessity of pulling up once.

The application of this mineral earth to the above purpose, was known to the Romans; and so well were they aware of its utility, that they

scarcely employed any other material in the formation of their roads, besides the terra puzzolane found throughout their volcanic districts. Should the completion of those very important lines of communication, which, according to a statement in a former chapter, were commenced under Lord Hastings, in the neighbourhood of Saugor, be determined upon by some government acting upon the same enlightened principle, the acquaintance thus gained of the value of the Moormah earth may prove of the greatest importance. Instead of quarrying sand-stone rock, a work of great difficulty, and carting it to considerable distances, at an enormous expenditure of labour according to the practice heretofore followed, the volcanic districts through which the line passes will in future furnish an ample supply of a far cheaper and more durable material.

The town of Saugor is pleasantly situated on the borders of a beautiful piece of water, which is a source of the highest gratification and comfort to the inhabitants. The population continues nearly stationary, and may be estimated at 50,000. The majority of the people are Mahrattas; the Queen

(now a pensioner on our government) being one of that class. The place is a hot-bed for Pundits, those dead-weight men, who are neither useful nor ornamental; and seem to serve no earthly purpose, save that of enchaining the minds of the people and imposing on their credulity. These fellows aspire to a knowledge of the *shastras*, and affect to possess hereditary superhuman powers, by which they cajole their weak-minded fellow-creatures, both out of their money and common-sense. The Queen is a source of great emolument to them. She has a pension allowed her by our government of £9000 per annum (90,000 rupees), of which these holy men contrive to extract two-thirds. The poor woman unfortunately contracted an ague some time ago, and, as soon as this piece of intelligence became known, these Brahmins confidently asserted that, until they had been feasted, there could be no hope of her recovery. I am not sure that they did not go so far as to intimate that this visitation had occurred in consequence of the Ranee not having been so lavish in her bounty to them of late as a sense of duty required. Be that as it may, they now boldly took their stand, and insisted that no-

thing short of a feast to the priesthood would have the effect of propitiating the Deity.

To question the sincerity or correctness of so disinterested an assurance, would have been construed into nothing less than madness; and, therefore, the reader need not be informed that immediate orders were issued for the sumptuous entertainment of these holy men.

After living in clover for about a week, the periodical accessions of fever abated. Immediately the town rang with the joyful tidings; and the *pulaos*, *mitaees*, and other rich delicacies, poured in on the laps of these devout gluttons, more plentifully than ever.

The fever at length so far disappeared as to enable the Ranee to dispense with the valuable services of these court physicians. Slight returns of it occasionally took place, which, as before, always led to their pious aid being again put in requisition. The Queen's minister happening to visit me about this time, entered into a narrative of his mistress's long suffering, and how much she had been worn down by it. I offered to give him some quinine, which would have the effect of curing

her in a week. The man readily availed himself of the offer. Accordingly I prepared a small packet of powders, and gave him instructions how they were to be administered.

I learnt afterwards that they had never been taken. The estimable Pundits, hearing what had been done, alarmed the Ranee's fears, by telling her that it was a mere trick on the part of the English government to destroy her life. The powders I had sent for her use they declared to be a slow poison, which I had recommended for the purpose of causing her death, and thus saving her pension to the government by whom I was employed.

These calumnies being infused into her mind at a period in which a positive refusal had been made by our government to recognize a boy whom the Ranee had chosen to adopt, produced the desired effect; the slow-poison powders were thrown aside, and the cure of her malady again transferred into the safe and able hands of her immaculate Pundits.

The buildings in the town have nothing in their appearance which call for notice. There is a large fort, which now serves as an ordnance depôt. It

overlooks the lake, on the edge of which it stands, forming a picturesque object from many of the surrounding points of view. The streets are for the most part narrow and ill-constructed. The formation of a new *gunge*, or "quarter," was in progress when the prohibition to any further appropriation of the town duties was received, which compelled the commissioner to desist. As it is, the town has been greatly improved by the alterations which have been effected. An extensive ghât into the lake has been built, and the roads leading to and from the town widened and paved.

It is not generally known that the goldsmiths and working jewellers of Saugor are adepts in their art; the fame of many manufactures being very often confined to the places in India in which they are carried on. In the construction of chains, the Saugor artisans are particularly skilful. The workmanship of them is so delicate, as to vie with, if not to excel, the production of Trichinopoly. Indeed, the rose chain, as it is called, may be considered to be the exclusive production of the ingenious mechanists of this place. To look at one of these chains, and then examine the rudeness and

paucity of the tools by which it was fashioned, cannot fail to strike the observer with wonder and astonishment; while at the same time his mind is forcibly impressed with the conviction that these men would compete successfully with the most expert operatives of the western world. Rose chains are highly esteemed in England, and very justly so, since nothing to compare with the beauty and finish of these ornaments is to be found amid the costly *bijouterie* of a London or a Genevese shop.

The charges are moderate, and the arrangement for the purchase simple. The goldsmiths of Saugor are too poor to be able to keep a stock of jewellery upon hand; but when an individual requires a chain, or any other ornament, to be made, he sends for the *sonar*, and gives him as many gold mohurs, or Venetian ducats, as he may desire that the article should consist of. Should it be a chain, from nine to twelve gold mohurs are required. The man takes the money away with him, and at the end of a fortnight or three weeks, returns with his work, receiving one gold mohur (1*l.* 16*s.*) for his labour. Gold being imperishable, and the metal employed

in the mohurs, or Venetian ducats, very pure, the workmen are not allowed to plead wastage; and, upon bringing the chain home, it is expected to correspond closely in weight with that of the coin given for the manufacture. The artisans are usually trustworthy men, and little apprehension need be entertained of their tampering with the purity of the metal by mixing alloy with it; but, should this happen, an assay would of course detect the fraud.

One hundred rupees a month have been granted for some years past by the Education Committee of Calcutta, for the maintenance of a native school at Saugor. This, as well as similar sums granted for a like purpose, comes out of the annual grant of £10,000, which the India Company are obliged, by the stipulations of their charter, to lay out in the promotion of learning and literature in the East. Three languages are taught at this seminary,—the Mahratta, Persian, and Hindee. The number of pupils average about three hundred. The necessity of avoiding any direct interference with the religious prejudices of such a bigoted set as the greater number of the Saugorians are, has caused the translations of the Old and New Testament to

be prohibited; but translations of the most approved of our school books on morals are in common use among the Mahomedan and Hindú youths of this school. Moreover, they are provided with the best authors of their own country, as well as the most instructive and popular English works on history, geography, mechanics, &c. A public examination is held annually, and the most diligent and praiseworthy are rewarded by presents of books, handsome turbans, and sweetmeats, according to the different degrees of merit displayed.

The first rudiments are given in sand, in the same manner as at Madras and other parts of India, being the method introduced by Dr. Bell from those places into our present Lancasterian system. In arithmetic, the higher boys evince an astonishing proficiency. The ordinary process of calculation in use in our English schools is far inferior to theirs. The only system that equals it being the one adopted by the British and Foreign School Society in London*, which, as far as I am able to judge, must have been borrowed from the Hindú

* The system of education pursued by the teachers of this society, is far in advance of the ordinary practice of the day.

schools. Many clever lads have been educated at the Saugor seminary; which, being one of the sources whence we may hope to obtain an improvement in the benighted understandings of our fellow-subjects in Hindústan, deserves the fullest encouragement. Lord William Bentinck so considers it. When at Saugor, in 1833, his Lordship held an examination of the boys at the school, in order to evince to the inhabitants the deep interest which he took in the welfare of the establishment.

Krishen Rao, the officiating head master, a highly respectable man, the son of Nana Dewan, who was a person of great influence under the preceding government, so pleased him, that his Lordship invited him to visit Calcutta; ordering at the same time the payment of his expenses from the public treasury.

Lord William embodied his views on this subject in a Minute, in which he expressed his conviction of the utility of giving all respectably educated natives as enlarged views as possible of the progress of European skill; stating further, that nothing, in his opinion, would contribute more to this end, than their being invited to visit the seat of government,

where they would have an opportunity of seeing ships, the machinery, and mode of life attached to the European community. His Lordship authorized the expenses of Krishen Rao's journey to be defrayed by his own banker, in case his council should disapprove of his resolution.

Krishen Rao availed himself of this invitation; and, upon his arrival at the Presidency, he was placed under the best masters, and admitted as a student at the Hindú College. The rapid progress he was making in his studies in the latter part of the year 1834, when I again saw him, while waiting to embark for England, fully justified the high expectations which had been entertained of him by his Lordship; and, should his life be spared, no person seems to have a fairer chance of rising to eminence in science and learning.

In conjunction with Mr. Trevelyan, the deputy-secretary to government, he had published, he informed me, a useful elementary book for the schools; and, doubtless, should his health permit, he will engage in other works of equal importance; but his constitution is delicate, and I fear his mental vigour will not long hold out against the corporeal debility under which he labours.

The lake of Saugor is five miles in circumference, and is formed by the basaltic and sandstone hills which range around its margin, in a sufficiently connected manner to present an amphitheatrical appearance as they hem in this beautiful piece of water.

Numerous lofty trees abound close to its borders, and, at favourable seasons of the year, the English officers enjoy many hours of delightful recreation on its sparkling bosom. As many as four and five pleasure-boats may be seen at one time floating over its surface, their white canvas sails, silvered by the light, contrasting powerfully with the dark foliage of the margin, and the black and barren hills which overshadow its deep waters. Oftentimes at the close of one of those days in which the hot sun has been pouring down its fiercest beams, giving to the Anglo-Indian a very lively idea of the torments of purgatory; or, upon escaping from the din and heat of a crowded mess-room, parties would frequently repair to the lake, and seek in the cool and refreshing air of night, a calm for the fever in their brains, and that delicious tranquillity of mind which the scene is so well calculated to bestow.

No person can truly appreciate the luxurious feelings which the nights afford in India, but those who have enjoyed them. So delightful is the change from the glare and heat of the day, that, were it not for the danger to the health to be encountered by exposure to the night air, many, more than now do, would feast their appetite on such delicious food, especially when the moon adds her bland influence to heighten the beauty of the scene: but India, unfortunately, does not possess a climate which admits of such indulgencies with impunity.

A great variety of fish are found in this lake; and in the cold season, teal, wigeon, wild ducks, and sometimes geese, are met with in great abundance. As for snipes, they are without number—it is by no means unusual for a good shot to go out for about four hours, along that portion of the lake opposite the government mint, where the land is swampy, and kill eighteen or twenty couple. There is great risk, however, attending this diversion, as the sportsman is ankle, and sometimes knee-deep in mud and slime the whole time, and, in consequence, very apt to come away with the seeds of a quotidian or tertian ague in his veins.

CHAPTER III.

Indian Swell Mob—Lounges—Misdoings of the B'hankurs—Summary Punishments—Troopers and Sepoys—Disrespect to Old Age—European Society at Saugor—Scene at a Billiard Table—Periodical Literature—Newspaper Press of Upper Hindústan—Conduct of Lord W. Bentinck—Iron Suspension Bridge—Horse Racing.

GENTLEMEN of the swell mob are to be found in every part of Hindústan; and Saugor being very numerously supplied with these worthies, the introduction of some account of them in the present chapter, may serve to diversify the graver portions of the details which the nature of the work necessarily involves. The Chevaliers d'Industrie in India differ both in character and appearance from their brethren of the western world. There the place of the dashing *leg* with his cab and tiger is supplied by the Dandy B'hankur, whose time is pretty equally divided between an attempt to create a sensation by running away with the heart of some shopkeeper's

pretty wife, and the subsequent squandering in the gambling-houses and sweetmeat-shops the money which the fair frail one has lavished upon him. And for the humble but industrious *prig*, we have the no less expert and efficient Deewaleah.

The sweetmeat-shops are the grand resort of the B'hankurs. These places form the coffee-houses of Hindústan, although humble substitutes it must be confessed, and it is here that they rendezvous and lounge away their time. Whoever the party may be who are assembled, or however personally concerned the individuals may be in the topic of discussion, the strict rules of decorum are rarely, if ever, broken through; so that the greatest harmony and good humour usually prevail. It is also tacitly understood among the party, that the ladies shall never be introduced as a topic of conversation; a precaution necessary to avoid the possibility of betraying the confidence which has been reposed in them. When a woman, therefore, gives her reputation into their keeping, it is as safe as if she had never parted with it; their *liaisons*, consequently, remain a secret known only to themselves and the objects of their pursuit.

It must be said that such conduct is highly creditable and deserving of commendation, and it should serve as a lesson to persons nearer home, whose self-esteem causes them to be less scrupulous in these matters. No prohibition exists upon other subjects, which are treated with great freedom of speech, not so eloquently perhaps, nor with such refinement of language, as among their brother fashionables of the West, yet with equal fervour and strength of voice. The favourite topic in the Central and Northern parts of Hindústan is war. At one of these reunions one may hear of exploits performed by a single arm, at the recital of which even Secunder would have turned pale, and Rustum himself have trembled.*

One of these Indian Roués may be readily recognized while sauntering along the street, or lounging at the fashionable gât. The whole set are naturally enough considered an abomination by the heads of all well-regulated families, as they do more to disturb the domestic peace of these good papas than all the vexations of life besides. They

* Secunder is the Asiatic name for Alexander the Great; and Rustum is a hero celebrated in the legends of Persia.

sport the gayest of turbans, which, instead of being worn bolt upright, as a sober steady-going man would do, is adjusted with the slightest inclination to the left, while their jet-black and flowing locks redolent of perfume and oil, hang luxuriously pendant over the ears, or are pinched up in one huge curl on either side the temple. The mustachios and whiskers are cultivated to a nicety—not a hair in the twist of the one, or the curl of the other, can be detected out of place; and so powerful are the latter esteemed in the catalogue of attractions, that, lest their symmetry should be disturbed during the interval of repose, by coming too roughly in contact with the pillow, they are carefully bound up at night, as a lady in England would bind up her cheek for the toothache, in a soft cotton or silk handkerchief, until the important hour on the following day arrives for the business of the toilette. The dress is the finest and most showy that can be procured, while their loose trousers, richly ornamented slippers, and closely bound waist, all indicate the time and attention which have been devoted by these Lotharios in making themselves killing.

They sometimes sport a scimitar in a rich velvet scabbard, when, if an humble pedestrian happens to come between the wind and their nobility, they look daggers at him; especially if some dark-eyed beauty should at the time be passing by in her jingling bullock-cart.

The civil officers of the Government are much annoyed at the constant complaints to which the evil doings of these gentry give rise. Some simple-minded husband comes, perhaps, to complain of the loss of his wife's affection; stating in grief of heart, that since one of these Dandy B'hankurs crossed her path, her head had been turned; and that now, instead of attending, as she was wont to do, cheerfully to her domestic concerns, she is all the day long pouting and fretting, and making life miserable to him.

Another, that his rib had left him, after carrying off with her everything that she could put her hands on. While a third, in an agony, declares that he has discovered all, and that his wrath shall never be appeased till he has drawn the life-blood from his injurer.

These are but a few of the heads of complaint

which are daily falling under the cognizance of the civil authorities, but they are sufficient to show the extent of mischief which the B'hankurs occasion. On the other hand, these fellows are themselves guilty of the most frightful crimes. Foolish women meet them by assignation, or, under safe circumstances, even admit them into their own houses; and, on such occasions, in order to fascinate the lover more completely, these deluded creatures seek to heighten their charms by decorating their persons with the entire contents of their caskets. These jewels are sometimes of great value, in comparison with the position in society filled by the owner; and form a temptation too strong to be resisted by the ruthless villain who makes a trade of seduction.

Having induced her to agree to an assignation, and enticed the fond believing victim to some sequestered spot, the monster affects a fit of jealousy, picks a quarrel, and then suddenly seizing her, stabs her to the heart, and thus makes himself master of her wealth. Such outrages may seem almost impossible, but I beg to assure the reader that this picture is by no means overdrawn.

Many times during my residence in Central India has it been my painful lot to be called upon, in my official capacity, to report on the mutilated bodies of females found in the suburbs of Saugor, in a manner which left no doubt on the mind that the murder had been committed entirely from motives of this nature. Respectable witnesses have proved that the female had quitted her home bedizened with ornaments; and subsequent evidence has satisfactorily shown the perpetrator of the guilty deed to be one of the B'hankur class.

After the perpetration of the murder the corpse is usually thrown into a neighbouring well, for the double purpose of avoiding immediate detection, and enabling the culprit to escape with his plunder. One of the finest made women I ever recollect having seen was brought for my inspection inhumanly butchered in this diabolical manner.

As good looks do not last for ever, or the salt of manhood maintain its piquancy throughout life, so, when these gentry wane and can no longer hope to be maintained in their extravagant habits by their generous and fond dupes, they settle down into thorough going vagabonds, and become practised

adepts in all that concerns the tricks of chicanery and thimble-rig.

In the British possessions of India, when a man is apprehended on the charge of shop-lifting, pocket-picking, or any other act of petty larceny, and afterwards duly convicted, he has generally to visit a public establishment of a certain description for a period of twelve or twenty-four calendar months, there to be maintained at the government expense. Not so, however, with the native powers. They laugh at the idea of erecting a building for the purpose of congregating a host of vagabonds, who, were they not incorrigible before, would be sure to become so by so close an association with their fellows. They have recourse to a far more summary process, and it must be confessed, as far as the people they have to deal with are concerned, a much more impressive one. Moreover, they equally scout, as preposterous and absurd, the notion of being obliged to expend any part of their own money in the maintenance of a prison establishment. What they do then, is, to have the culprit up, and should he be proved to have committed the crime laid to his charge, execute a summary punishment on

him. This is usually of a corporeal kind, the degree of severity being apportioned to the offence for which he has been convicted. Should the offender be a *chevalier d'industrie,* and proved guilty of doing evil in the small way—in a tangent off goes the tip of his nose, or the lobe of one ear. If it happens that he has outraged the laws of honesty in a more serious manner, then a more lamentable mutilation takes place: the right hand, from being considered the one by which the guilty act was perpetrated, is doomed to be removed, and by one blow, from a heavy tulwar, it is severed from the wrist.

Whenever a notorious thief is caught in the territories of a native prince, unless he can stop proceedings in limine by a golden sop, he is sure to get branded by treatment of this kind. After which he is set at liberty. To stop the profuse hemorrhage from the stump at the wrist, a red hot iron is applied. These clippings serve as character marks, by which the respectability of the individual may ever afterwards be known. The stump they endeavour to conceal, but the deficiency of the nose-tip cannot be hid. Men who

have suffered these mutilations are frequently to be met in the streets of every town of Hindústan. Whenever it occurs that deliberate murder has been committed (as in Thuggee for instance), the death which the destroyer suffers is a peculiar one. He is either incased alive in masonry, or a piece of ordnance is drawn out and shotted. The prisoner is then placed opposite to its mouth, and by its explosion blown into the air, shattered into a thousand bits!

The dread which these summary punishments exercise upon the minds of the subjects of the native independent princes of Hindústan proves an efficient safeguard to property, and is the principal cause of crime not being more prevalent among them.

The only class of men who may be mistaken by a traveller for the B'hankurs are our troopers and infantry sepoys. These men are scrupulously nice in their persons when off duty. A young Mahomedan soldier devotes half his leisure to the training of his eye-brows, and the cherishing of his mustachios and whiskers; the latter being an object of great solicitude. In my description of

the Indian dandies I have noticed the extraordinary care and attention paid by that disreputable set to so distinguished an ornament to a manly countenance; and I stated that, for their due preservation, they bound them up carefully at night, as a lady would her cheek when suffering from the tooth ache: now a gay young trooper does more than this, he not only keeps his whiskers in lavender all night, but passes half the day with the bandage round his face, in order that in the evening at the nautch, or at the sweetmeat-shop he may be perfectly irresistible.

Again, as the inroads of care and time encroach on their youth, one, then two, perhaps three, grey tubes unheeded steal among the rich and luxuriant locks. The unwelcome intruders are routed with indignation, but, alas! after the lapse of a few years, to eradicate them would be equivalent to the sacrifice of the whole. Recourse must now be had to art, and for this purpose the black sulphuret of antimony very finely levigated, called *soorma*, is put into requisition, to avert the dire appearance which such an unwished-for alteration has produced.

The antimony does not change the hair from a grey to a natural black, but leaves it rather with the appearance of a purple hue than that of a dark brown or jet.

Grey hairs in India do not receive that veneration which is paid to them in Europe; and efficiency in appearance being often the test by which competency to a task is measured, it is not surprising that, in addition to the ordinary prejudice of his country, the native officer should have another motive for calling in the aid of art, the desire to present himself before his European superior in all the juvenility of by-gone days. Therefore, previous to his attendance on the commandant to make his report or pay his daily visit of ceremony, the process of colouring and binding up are carefully performed, in order that he may, when entering the room, appear to the best advantage.

In Hindústan, out of the circle of the individual's own family, old age commands no respect. Indeed, females stricken in years are objects of abhorrence; so much so, that should a creature of this description by accident unhappily lose her

life, the circumstance is regarded as a fortunate dispensation of Providence, rather than as a calamity. They are considered to have long ceased to live for all useful purposes, and it is the general opinion that their further existence on earth will tend only to evil and mischief.

Whether the truth of the old proverb, which says, "A woman would not go to the oven, &c. &c." be their certificate of recommendation or not, I cannot pretend to say; but certain it is, that the old women of Hindústan are the most able go-betweens in an intrigue that a man can have, and that in nine cases out of ten, in which the green-eyed monster has broken in to disturb the harmony of domestic life, a Boodnee has been the agent.

To some, these time-worn matrons prove the personifications of evil, and should an ill-starred wight fall under their ban, the tortures of purgatory could be borne by him with greater fortitude than the torrent of words with which he would be overwhelmed. So beautifully elastic, yet so curiously wrought are the vocal chords of the ladies, that in all countries, it is reported they keep tune with the active imagination of their minds.

Indeed so great a favourite has the use of this little three-stringed instrument become in the estimation of their individual owners, that many, in the exercise of their perceptive and reflective faculties, prefer to think aloud. Far be it from me to endeavour to deprecate the free exercise of so useful an agent; for what falls sweeter on the ear of man than the soft cadence of a woman's voice? Indeed the seven learned Persian women, in their "code feminine," styled the Book of Kuslum Naméh, declare,

> "Lovely women should always let their sweet voices be heard;
> For there is nothing in the world more pleasing,
> Than hearing strains of melting melody
> From lips that shame the ruby."

In fluency of speech, the old women of Hindústan may with safety be considered without their equal; and should they have chanced, during their career, to have followed a camp, they may, under such circumstances, be considered invincible on any ground. An English beldam, educated at the noted seminaries of Billingsgate or Rosemary-lane, and skilled in all the varieties of language

that can give vigour to a debate, will perhaps, on some interesting occasion, maintain a war of words for an hour, after which come blows, and there an end. But her counterpart of Hindústan, if we are to believe the worthy Forster, improved by a few campaigns, has been known to carry on a colloquial combat, without introducing one manual effort, for three days in succession, eating and sleeping at reasonable intervals!

In resuming the subject of the last chapter, it must be said, that the European Society at Saugor is, for an Indian *back station*—as Blackwood, in one of his Numbers, calls the inland stations of Hindústan—somewhat extensive. Besides the resident members of the Political Agency, there are the officers and their families of four corps of Infantry, one of local Horse, a company of Artillery, with a Commissariat and full staff; forming altogether a circle large enough to admit of every kind of amusement, and yet not so extensive as to divide it into particular cliques.

Everybody may be acquainted, without the slightest inconvenience, with all the members composing it; and though, of course, congenial dispo-

sitions will associate more closely with each other, one spirit, and that of a very benevolent nature, as far as my observation went, appeared to animate the whole community.

The station is, as it were, isolated, and widely different from those in the Gangetic Provinces. There, the arrival and departure of boats with merchandise, and new faces, give an ever varied aspect to the scene; but here, excepting in the cold season, the residents are never favoured with the sight of a bird of passage. This circumstance has doubtless contributed not a little to the promotion of a greater degree of sociability of feeling, than is to be found in any other station not similarly circumstanced.

Honourably exiled as are the greater number of Europeans whose lot is cast in India, the extension of every finer sentiment of our nature should be assiduously promoted, in order that the bitter thought which the recollection of perpetual banishment engenders, may be tempered into endurance.

Billiards prove a favourite morning amusement at all Indian cantonments, and the Saugor rooms form the gossiping shop of the station, and the

daily scene of meeting of the quidnuncs of the place. The first intelligence of an interesting bit of "local" is sure to be picked up here; and if it happen personally to affect any one of the party present, it is made a topic of conversation during the whole forenoon. Such a godsend as a step in rank, for instance, would be an ample repast.

The reader must be informed, that ordinary deaths in India are treated much in the same manner by the survivors, as those of princes are elsewhere;—condolence and congratulation generally coming in the same breath. "Poor B!—How sorry I am!" would be the exclamation.—"Who does that promote?—C.—What a lucky fellow he is!" This leads to an inquiry into C.'s length of service, or standing, as the phrase is; and perhaps it turns out, that he has stepped into a majority without passing half the number of years in the country which a friend present has numbered, who is still probably third captain in his regiment, with no prospect of obtaining the spurs for the next ten years.

The subject now takes a painful turn—regrets

at not having joined some other regiment when arriving in India, or lamentations at having exchanged, when first posted, from a corps which has been "lucky," which means, whose regimental officers having been exposed in the performance of their duty to the influence of a tract of country more pestilential than ordinary, have died one after the other, and admitted of some absentee brother being lifted on, to the dismay and envy of all his contemporaries.

Again, this leads to the favourite discussion of the propriety of doing something to avoid 'such cruel supercession'—and then comes an allusion to the iniquity of the half batta measure, and a general indulgence, in no measured language, of abuse of the petty acts of the government. The latter part of the discourse being on a subject in which the speaker is personally concerned, he delivers himself not only forcibly but fluently, and warming as he goes on, winds up with a peroration both energetic and violent.

This would be sure to lead to a reprimand, which generally came from a little man who was a great favourite with all, as he had a fund of

anecdote always in store, and a story at hand that would be sure to outdistance in extravagance the one which preceded it. "Gentlemen," he would exclaim, chalking the leather deliberately, and looking up with the gravity of a judge in the faces of all, "Gentlemen, I must put down my cue if there is so much noise," and then missing a most palpable score, he would add, "No; I knew it; I cannot make a stroke while so much talking is going on." Silence would now be restored, and the progress of the game carefully watched, till the approach of a distant vehicle would draw off all eyes towards the door. "Ah, Jacobs, have you heard the news?" would be the simultaneous cry from half a dozen voices as the new comer entered. "I! no: what is it?" then would be re-read the contents of the letter, which had just been received by that day's post, announcing the unexpected death of B., having been ill only three days, and the promotion of that lucky fellow C.

This would call forth the views of Jacobs respecting the supercession of the older officers together with a diatribe on the illusive nature of the service in general, a touch at half batta,

and then a peroration as before of imprecations on the heads of all those concerned in the execution of that detestable order.

Silence would by this time be again demanded and obtained, till the arrival of a third visiter put everything like attention to the interests of the players out of consideration by the announcement of a third budget of news, leading to another discussion, and a similar conclusion.

Perhaps, from the sketch now given, the reader may suppose that the leisure of an Anglo-Indian is passed exclusively in the enjoyment of frivolous amusements, and that intellectual pursuits are disregarded, if not totally neglected. This, however, is not the case, for the very greatest attention is paid to the current literature of the day. Throughout the army there are regimental book-clubs, and at every station one maintained by the permanent residents. From eighty to one hundred pounds are annually appropriated by each club to this useful purpose; and with the exception of a necessary limit to a specific sum, and an order for periodicals that may be particularly required, the London bookseller has a carte blanche to send

whatever new publications are deemed most popular and meritorious.

So attentive are these gentlemen to the interests of their correspondents, that long before a book has got into general circulation in England, it has been received in Calcutta, read by all the societies in Hindústan, and thrown aside. In a knowledge of the periodical literature of the day, the society of India is particularly conversant; it being by no means an unusual thing to find the Quarterly, the Edinburgh, Blackwood, Fraser, New Monthly, and many others, on the table of an Anglo-Indian in Upper Hindústan within four months and a half after their appearance in England. So that to suppose the people in our eastern empire to be ignorant of the passing events of the day, in the political and literary circles of the West, would be to form a very unjust and incorrect estimate of the application of their time. They are fond of innocent and playful recreation, it is true, but at the same time far from neglectful of their mental improvement; nor are the Anglo-Indians satisfied with the importations from Europe.

The growing demands for knowledge could ill

brook the inconvenience of waiting for the home supply. The evil was felt by all, but more especially by those utilitarian spirits of the community who, ever seeking to benefit their fellows, discovered that much talent and time lay dormant and unappropriated among the class termed by political economists the *unproductive*, but more familiarly known as the Anglo-Indian society. The remedy then was at hand. Possessing materials within themselves, an individual of enterprising genius—a member of the medical service*—determined upon embarking his capital in the establishment of a printing press at Agra, trusting for literary assistance to the abundance of talent which he knew would be always within his reach.

The newspaper which he produced was called the "Mofussil Ackbar," which means the 'Inland Newspaper.' About the same time appeared "the Meerut Observer," and soon after these "the Delhi Gazette." A fourth was brought out at Cawnpore, but the spirited conductor dying, it fell off, and is now become, like its originator, defunct. These papers are published weekly, and their able management has earned for them an

* The late Dr. Henderson.

established reputation. They have been in existence upwards of three years. Besides serving as the organs of opinion of the society of Upper Hindústan, and keeping in check the crude theories regarding the interior, in which the Calcutta writers were apt occasionally to indulge, these journals are invaluable as repositories of passing local events; while the leisure and cultivated minds of their respective supporters furnish them with essays and communications that would not disgrace the columns of "the Thunderer" itself. The encouragement which these publications has met with, has, within the last few months, led to the establishment of a monthly periodical, which, to judge from the few Numbers that have appeared and reached England, fully supports the independent character as well as the reputation which the press of Upper Hindústan has hitherto maintained. An article published in the first Number of this magazine on the administration of Lord W. Bentinck, is a very severe one. "The press was next ostensibly freed," says the writer, "but virtually trammelled by him; the metropolitan literature was then governed by merchants, who did not dare to speak out, while, with the

infant Mofussil paper at Meerut, hints, persuasions, and private letters were addressed to the supposed conductors of the Benthamite journal: at last, one of their members became a marked man; and recent events have shown, that when the time came, the blow, though deferred, was not less ruinous to the sufferer. The hints or private letters remaining unnoticed, a more direct method became necessary, and, in January, 1834, the conductors received an intimation, conveyed officially through the commissioner of the Meerut district, that his Lordship *would suppress the journal,* should there be a recurrence of the matter at which he had taken offence. This, then, was the freedom of the press so much vaunted by his Lordship's admirers!"

In illustration of his Lordship's *real* sentiments regarding the press, the writer, in No. 2, refers to Lord Bentinck's conduct while governor at Madras, in refusing permission to Sir William Gwillim to publish his address to a jury; "an address," continues the author, "written by a judge, an address spoken by that judge when presiding on the judgment-seat of the highest tribunal of the country:" and then contrasts the late conduct of the same

Lord William Bentinck in his reply to an address from the people of Calcutta.

To the former his Lordship's reply runs thus:—"It is necessary, in my opinion, for the public safety, that the press in India should be kept *under the most rigid control.* It matters not from what pen the dangerous matter may issue, the higher the authority, the greater the mischief." While to the latter he holds out language of a totally different import, and declares that "He knew no subject which the press might not freely discuss."

"We ask of those," continues the journalist, "who would exalt the character of the late ruler over India, if there was a man in a hundred thousand who had the most remote suspicion that his Lordship would profess himself a disciple of the Adam* school? If there was a man engaged in the periodical literature of Calcutta who anticipated the refusal? If there *is* a man in existence who can reconcile that refusal with the sentiments with which Lord William Bentinck, as Governor-General, strove to impress the Indian press?"

* It was Mr. Adam who broke up the Buckingham establishment at Calcutta.

The writer then insists that all the benefits conferred by his Lordship, like the memorandums of Mr. Puff in the *Critic*, are all prospective; and that, during the six years and a half of his rule over the empire of India, he did nothing whatever to improve the internal resources of the country. In proof of this assertion, an abstract of imports and exports is given, commencing from the year 1823, in which Lord Amherst arrived in India, up to the year 1833, by which it appears, that throughout the period of Lord Bentinck's government, there has been an average decrease of eighty-two lakhs, and twenty-nine thousand rupees, or upwards of £820,000 sterling per annum!

There are three exceptions which the writer ought in justice to have made in favour of this last assertion. The one is the re-formation of a new line of road to Benares, referred to in another part of this work; the sanction which he gave to the establishment of an efficient plan to secure the lives and property of native merchants and travellers generally, by ridding the roads of those human monsters called Thugs; and the promotion of steam navigation on the Ganges.

The Parish Squabble, in the same Number, is an admirable caricature sketch of the "powers that be" in Calcutta. Indeed, every article is cleverly and forcibly written; and the Journal, if supported by a succession of contributions containing the same diversity of talent which has been displayed in the first Numbers, cannot fail to secure for itself a lasting reputation.

In appearance, the Meerut Universal Magazine more closely resembles the Metropolitan than any other of the monthly London journals. Some readers may be of opinion that I have given unnecessary time and attention to the notice of this publication; but the establishment of the Meerut Monthly Magazine, with its three English weekly prototypes, 1000 miles in the interior of Hindústan, I conceive to be a circumstance of no trivial import. It forms the commencement of a new but proud era in the annals of British literature in the East; and is the germ whence will spring a mighty plant, either of good or evil, according to the hand that shall cultivate and train its early shoots.

One of the favourite, I was about to add fashionable, places of resort, of the members of the Euro-

pean community of Saugor, is a spot about ten miles from the station, on the banks of the Beos river, over which an elegant iron suspension bridge has been thrown by Major (now Lieutenant-Colonel) Presgrave, of the Indian army. This is the work to which I casually alluded in my account of the roads of the Saugor and Nerbuddah territories. The interest created in the minds of those who are acquainted with the circumstances of its origin, and the curiosity excited by descriptions of the bridge itself, rather than any particular attraction possessed by the scenery around, have formed the inducements which have led so many persons to visit the spot which boasts so singular and so elegant a structure. Officers who have been ailing during the rains, and who, upon the commencement of the cold season, are recommended by their medical attendants to apply for permission to change the scene by a short sojourn in the neighbouring hamlets, generally select "the bridge" for the place of their encampment. A pleasure party is formed for the purpose of fishing and shooting, and "the bridge" becomes the chosen spot. Being the first halting-ground to the traveller who is quitting

Saugor, and the last to those who approach it in the direction in which it stands, "the bridge" is known to everybody, and everybody speaks well of "the bridge."

The road into cantonments is good, so that an invalid may drive in and out with facility. It would be unpardonable, therefore, in any one who attempts to sketch "the doings" of Anglo-Indian society at Saugor, to omit a description of this popular lion. The circumstance of its occupying so prominent a position in the estimation of the community, would alone be sufficient to authorize a faithful account of a structure so much admired; but a far more important purpose has induced me to endeavour to interest the reader in its history.

This suspension bridge *has been constructed entirely out of the resources of the district, and by an amateur mechanic, who had never seen an iron suspension bridge in his life!* and yet we have an assurance from the visiting engineer for the north-western provinces and Central India—Major Irvine, C.B., that he had seen nothing superior to it in England.

The undertaking was altogether an experimental

one; for, as I have elsewhere mentioned, there are no roads in this part of the country of any extent, and, consequently, little or no traffic between remote places; its undertaking, therefore, originated in a desire to ascertain the capabilities of the materials and the workmen employed.

Saugor, and the districts in its neighbourhood, abound in iron ore; and the authorities were anxious to prove whether this valuable mineral could be manufactured into bars of a quality fit for bridges, and whether, at the same time, they could be fashioned by native smiths, who had never wrought, or even seen, iron of the required dimensions.

Major Presgrave, then assay-master at the Saugor mint, voluntarily gave his services to government on the occasion; and it was he alone who planned, entered on, and accomplished an undertaking which, considering the circumstances under which it was projected, must be esteemed a truly wonderful performance.

It forms a striking instance of genius, aided by the light of science, vanquishing apparently insurmountable obstacles. Engineers in Europe, accus-

tomed to find everything provided for their wants, can scarcely conceive the difficulties which were encountered on the onset of this erection. None, save a master-mind, could have borne up against them. Not only was the business of builder and overseer, together with the subordinate trades of brick-maker, mason, carpenter, and iron manufacturer, to be added to his duties of architect and draughtsman, and that too in a climate in which a trifling exertion produces exhaustion, while incautious exposure will bring on fever and death; but he was also obliged to make the tools, and, *ab initio*, to teach the hands by which they were to be employed!

The foundation was laid in April, 1828, and the building completed and thrown open to the public in June, 1830. The iron of which it is formed is entirely the produce of the Nerbudda districts. When the bridge was projected, it was still in a state of ore in the mines, whence it had to be extracted, and smelted into small lumps, by the ordinary charcoal process of the country. The working of these crude, impure masses into good bars of the requisite dimensions and strength, proved to be a

work of extreme difficulty and labour. At the onset, two attempts were made before a rocky bottom could be found on which to lay the foundation. The banks of the river on either side are thirty-four feet high; the masonry was commenced six feet under the low-water level; the piers are forty-two feet high, the road-way being raised two feet above the ordinary surface of the country. The necessity of this precaution is apparent from the fact, that notwithstanding the height of the river banks, the freshes, during the season of the periodical rains, come down in such torrents that oftentimes the country is overflowed, and consequently, were not the platform of the bridge out of their reach very serious damage might be occasioned.

The bridge is 200 feet in span, between the points of suspension. The clear portion of the platform measures 190 feet by 11½. The tension of the bridge and chains, *unloaded*, is estimated, at either point of suspension, to be 95,632 tons; while, supposing the clear portion of the platform 190 feet by 11½, or 2185 square feet, crowded with men at 69lbs each superficial foot, the *loaded* bridge will have a weight of 120 tons; while the

tension at each point of suspension will be 217,674 tons. This gives ten tons as the maximum strain that can be applied to the square inch of sectional area of iron. The general tension will, of course, be less than half that quantity.

A compact body of men, as a regiment of soldiers, for example, marching over a suspension bridge, is the severest test that can well be devised to prove the strength of the work, and since the completion of the Saugor suspension bridge, many corps of infantry have passed over it; effectually proving, had there been a doubt, which I believe there never was, in the mind of Major Presgrave on the subject, that the bars were sufficiently wrought to sustain this immense weight. Every bar, before it was allowed to leave the yard, was tested by an apparatus for the purpose. It was made to bear a strain greater than its individual share would be when joined to its fellows, so that every precaution was taken that ingenuity could devise to insure success. Moreover, in the jointing of the bars, a method was pursued altogether new; but, in simplicity and efficiency, all judges who have examined it have decided to be, far superior to the plan commonly practised.

In the iron-work of the bridge there are twenty-eight tons eleven hundred and eighty pounds of metal, which, in its finished state, cost about £2 12*s*. a hundred weight. The whole erection stood the Government in about £4800, exclusive of a present of £500 which Lord William Bentinck made to Colonel Presgrave, as a remuneration for his services, when his Lordship visited Saugor, in 1832-33; making the entire cost something more than £5000 sterling.

Notwithstanding the countless extra expenses incidental to a first undertaking of this kind, and the distance to which all the materials were obliged to be transported, from the work-yard at Saugor to the place of erection, the bridge has been pronounced to be cheaper than those in Calcutta constructed of English materials.

Here then we have a structure which, in elegance, in magnitude, and in durability, may vie with the most perfect specimens of the kind in civilized Europe. And yet fashioned out of the oxydized metal as it lies embedded in the bowels of the earth, by the rude hands of a class of artisans, by no means as expert as their countrymen in

northern Hindústan, and the whole emanating from the genius and unremitting industry of one master-mind! Does not this speak volumes? Does it not satisfactorily show what India can do when her resources are properly drawn forth? And is it not a reproof to all who would seek alike to depreciate the country and the capabilities of her people? While an empire possesses engineers and artificers who are able to accomplish such a work as the Saugor iron suspension bridge, the infusion of capital is all that is required to render that country great among the civilized kingdoms of the world; and to this point must India arrive, if proper steps be taken to bring her capabilities into active exertion.

Horse-racing ranks among the favourite cold-weather amusements at an Anglo-Indian station. The preparation for this sport proves a source of pleasure and occupation, during many previous months, to those directly or indirectly interested in the contest. The races generally commence some time in the month of January, which requires that the horses should be put into training about September. The cattle are usually on the course by

gun-fire; and in order to see them take their morning gallop, the constitutionalists generally choose the race-ground for their ride. At Saugor, we were by no means backward in this exciting sport. The ground about the station being black, *rotten*, and undulating, the course cannot be called the best in the world; however, by the aid of a trifling subscription, the stewards are enabled to preserve the ground in decent repair. The length is a mile and a half, and a *distance*.

But, to begin with the beginning, the first step to be taken previous to an embarkation in this hazardous but exciting speculation, is to procure horses. A demand, they say, always creates a supply; and, to judge from the quantity of Arabian and other foreign horses annually imported into Hindústan, the aphorism is fully proved. About the months of July and August, merchants march across the peninsula of India from Bombay, at which place they have arrived by sea, with strings, or batches, as they are sometimes called, of Arabs, and from these the Anglo-Indian officers make their selection. It is amusing to remark the sensation occasioned at a station by the arrival of Shaick

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Ibrim, or Ibn Hassan, with a batch of horses. No time is lost, whatever the weather may be, but vehicles, hacks, and tats, are indiscriminately put in requisition to visit and examine the new arrivals.

Now it is that the knowing ones look high; steal visits at unusual hours, in order that they may pursue their search unmolested; and, when questioned, restrict their replies as much as possible to monosyllable answers. What can be more natural? they feel that they are at a premium, and therefore indulge in their self-complacency at the expense of the uninitiated.

At first enormous sums are demanded by the dealer, to which, of course, no one thinks of listening. Indeed, the merchant himself never means to make his first price an ultimatum; like the first parallel in a siege, it is an approach merely. Arab horse-dealers never bargain in the presence of a third person; and they require to be humoured and petted for days, in order to bring the price down to a consistent sum. A first-rate Arab, fit for the turf, cannot be procured for less than 1500 rupees (£150); and rarely at so low a price as that.

We will suppose, then, that the racer has been

purchased. Upon changing hands, "White's Farriery," or "Blaine's Veterinarian," is called into immediate requisition, and the party begins to administer a rare admixture of villanous compounds, which sometimes occasions such unlooked-for results, that the carcase of the poor beast is out in the fields, a prey to the floating scavengers of the air, at the end of a fortnight; such things have happened, and may do so again. However, should all go on prosperously, the nag enters upon his walking exercise some time in September, and from this time, as I before mentioned, takes daily exercise; the paces being increased as the period of the race draws near, until the arrival of the portentous day itself. Then what flurry and hurry-scurry prevail over the whole station! Young ladies go out with their mammas at peep of dawn, showing, by their early arrival on the ground, how little sleep they have enjoyed during the preceding night; their bright eyes glisten with animation as the different bits of blood, decked out in sporting habiliments, which afford a novel contrast to the usual military garb, dash up and pay their devoirs of compliment and adulation. In another direction,

big with the importance of their office, the stewards may be seen bustling and authoritative; each clad in shorts, jockey-boots, a bird's-eye cravat, black hat, and slashed coat.

The hope of reward sweetens labour; and it is fortunate that the worthies last mentioned, namely, the stewards, possess the ladies' smiles and the approbation of their own consciences to reward them; for of all posts of honour, next to being the manager of a mess, the most thankless is that of a steward to a race-course. Disputes are certain to occur; and, as sure as a decision is arrived at, it gives offence to the disappointed party.

The most agreeable office, after the amusements are at an end, is that of dispatching gloves and perfumery to the ladies, who are expected to pay their losses in the most recherché manner that the station can afford; the value of their contributions being enhanced by the elegant billets which usually accompany them.

CHAPTER IV.

Saugor and Nerbudda territories—Administration—Marching in the jungles—Sketch of reform—Division of the country—Population—Frightful murder of an English functionary—Witchcraft and sorcery—Slavery—Habits of the people—Graceful women—Causes assigned—Calisthenic exercise—Mahratta women—Flattering compliment—Race of Gonds—Acts of Cannibalism.

The Saugor and Nerbudda territories occupy a considerable portion of that part of the empire of Hindústan known as Central India. These territories are parcelled out into divisions, in size equal to our English counties, having one English officer appointed to each; and over them an European functionary presides, as supervisor-general, with the official title of Commissioner and Political Agent. The divisional officers are selected indiscriminately from the civil and military branches of the service, and have the official denomination of "Political Assistants to the Governor-General's Agent;" "but for short," as brother Jonathan would say, the

initials only of these words are used in ordinary correspondence, thus,—"P.A.A.G.G."

The administration of the Saugor and Nerbudda territories form an exclusive department of the state, under the term "Political." By this means military and medical officers are eligible to be appointed, which they would not otherwise be, had the country been placed under the statutes familiarly styled *Regulations*. There has always been a sort of emulation, therefore, on the part of the individuals engaged in the administration of the government in these states, to prove the superiority of their system over the method pursued in the "Regulation Provinces;" a circumstance which has not a little contributed to earn for them the high reputation, which, for cheapness and efficiency of administration, these territories possess.

An appointment to the political agency in the Saugor and Nerbudda territories is the best that a military officer can have; and to obtain it, the candidate requires not only a thorough acquaintance with the languages, but also very powerful interest. He is provided with a house to live in, and a consolidated salary averaging from £1000 to £1500

per annum, with a government establishment, as a matter of course, always at his disposal. The responsibility of this officer is heavy to a very great degree. The political assistant who discharges his duty properly, must work from morning till night. He is sole arbiter of the division over which he is placed. Besides the duties of magistrate, which are very harassing in every part of Hindústan, on account of the litigious disposition of the people, the adjudication of all civil suits forms a part of his duties; he is collector of land revenue and customs, diplomatist in the affairs of the resident native chiefs, postmaster, and treasurer. The reader will confess that these are fearful powers to be intrusted to one man: but by taking office conscious of the great responsibility incurred, mental energy, corresponding to the demand of his weighty official business, is called up, which carries him through his work with ease to himself, satisfaction to the people he is set over, and the approbation of the government by whom he is employed. Having no associate in power, there is no means of getting rid of that strong and active stimulus to exertion,—*individual responsibility*. To the assistant, and to him alone,

does the commissioner look for an efficient administration of the affairs of the division.

The magisterial powers of the Political Assistant are limited in the same manner as those of magistrates in the "Regulation Provinces." Sentences to the extent of two years' imprisonment and hard labour may be awarded. But should the offence for which the prisoner is brought up call for more condign punishment, and the testimony, in the Assistant's opinion, be sufficiently strong to justify a commitment, the culprit is made over to the custody of the gaoler, to take his trial at the ensuing annual sessions. In civil suits, I believe, the authority which the Political Assistant possesses is unlimited, but should a suitor feel aggrieved at the decision, he has a right of appeal to the Commissioner's Court.

The Commissioner himself is expected by his government to make a half-yearly circuit, as session's judge. So extensive, however, is his jurisdiction, that five months are required to make the tour; therefore, were he to pay a visit every six months to each division or county, he must necessarily be on the move throughout the entire year,

as the period for setting out would have again come round by the time he had terminated his judicial peregrinations. A performance which here, as in every other part of Hindústan, but in these provinces in particular, it is impossible to execute with impunity to the health, and therefore absurd on the part of the authorities to exact.

No European can pass through the dense jungles of the Nerbudda, with a chance of saving his life, during the months of July, August, September, October, and November; perhaps I might add December. With the assurance of this fact staring them in the face, what folly, indeed worse than folly—for some people would call it deception—it is to endeavour to deceive the world by a display of a speedy administration of justice in these territories, by ordering a half-yearly gaol delivery, when in point of fact it is only an annual one.

An individual, when accused of having committed a grave offence, is placed in confinement in the division prison, and has to wait till the arrival of the judge whom the Political Assistant usually pays the compliment of receiving at the confines of his jurisdiction; and of attending him

afterwards during his residence within its limits. On these occasions, as the Commissioner is accompanied by his surgeon and one or two junior political assistants, besides an escort, under an European officer—while at the same time the divisional officer has invited, in all probability, a few friends to join him; a delightful circle is formed, giving animation and cheerfulness to what would otherwise be a dreary and fatiguing journey.

Sometimes the camp is a very extensive one. I recollect on one occasion mustering as many as twenty-three at table—and this too in the depths of the Nerbudda country—no insignificant number of hungry mouths for *Khansaman jee* to cater for every day. Our host, however, kept a princely table, and the daily display which was made at breakfast, tiffin, and dinner, would almost exceed belief. Marching every day, too, at an average of fourteen miles a day over a country in which there was frequently not a vestige of a road to be found, and nothing but impoverished villages to be encountered! How admirably do the servants of Hindústan manage in a line of march, to provide for the daily wants of their masters! In that essential

requisite punctuality, without which the best meal is worthless, they are inimitable. For a month together, while moving every day, they will not be found to vary from the appointed hour more than fifteen minutes, a grace, an artist with a first-rate *batterie de cuisine*, would not deem too long to expect.

In seasons of the most trying emergency, when perhaps it has been raining a torrent all the morning, and cold, wet, and wretchedly comfortless, the traveller gallops along, passing his tents, which as yet have only advanced about two-thirds on the road to the place fixed on for the day's encampment; with his mind imbued with the most thorough and perfect conviction of there being no chance of getting shelter for hours to come;—he no sooner arrives at the wished-for mango grove than as if by the hand of magic, he finds that the table-servants (if they are really good for any thing) are all up, with the exception of the one who remained behind to give his master a cup of coffee before he quitted his bed; and that, by dint of foraging, they have procured from the vil-

lagers an ample supply of fowls,* kids, eggs, and yams; while an earthen jar, filled with water, boils merrily at a little wood-fire, ready to enter into collision and combination with the fusible particles of the Sahib's coffee or tea. So that with a high seasoned omelette, or a no less piquant grilled pullet, an excellent meal is discussed, under cover of a temporary straw shed, which these servants have provided; and the health fortified against the assailments of the wet, till the arrival of the tents, which are speedily pitched, and master and man made once more comfortable for the day.

This punctuality was conspicuous in the line of march now alluded to. Each morning, as our formidable cavalcade galloped up to the ground, would the delightful response of "Ha, Sahib!" be given to the anxious and important query of

* There is a variety of domestic fowl found in Central and Northern India, the bones of which are *black!* When I first encountered one of these birds I fancied I had been partaking of a diseased pullet, and was in the act of abusing the Khidmutgars, when they, with all the gravity imaginable, "begged to assure his honour, that it was a kurruck n'hat moorgee." A species highly esteemed by them.

"Hazree, tueyar hy?" (The breakfast, is it ready?) "Yes, sir."

While the Commissioner and his political assistants are busily engaged in their respective ambulatory courts, which are held in double poled tents, the idlers of the party sally out each day in different directions, either together or divided into parties, in search of game for the morrow's dinner. If on the banks of a river, and the Saugor and Nerbudda territories abound in fine streams, then the lovers of piscatory amusements have recourse to their rods and lines, never failing to come away loaded with an ample supply of the finny tribe; while those who agree in Dr. Johnson's definition shrink from such a puerile sport, and seek, in the close and open covers of the country round, for the majestic nyl-ghau, the spotted deer, the whirring quail, or the beautiful painted partridge.

Each Assistant necessarily having his native court officers with him, the numbers on these circuit tours become very considerable; and to meet the daily demands for corn, and other necessaries, an order is issued beforehand along the line of country in which the party propose to travel, for

the different Government native collectors, called Tuhseeldars, to see that necessaries of all kinds are provided. This individual, on receiving the mandate, dispatches his subordinates in all directions, and the village dealers are thus congregated at the several places selected for the encampment of the party; measures which almost preclude the chance of dearth which so large a collection of people suddenly arriving in a poor and scantily populated tract would otherwise necessarily sustain.

The Commissioner usually disposes of all his judicial business before he leaves the division in which the cases arise. The Political Assistant lays before him the depositions which he had previously taken, and any other collateral evidence he may have subsequently procured; and should other information be required, he is present to furnish it. Whenever the life of a prisoner is to be forfeited, the sanction and warrant of death are required to be obtained from the Supreme Government at Calcutta, before the execution can be carried into effect. Any punishment short of loss of life is usually put in force without communicating with

the Sudder Board. The salary which the Commissioner on the Nerbudda receives is £5500 per annum.

In order that a proper degree of dignity should be supported by all their chief functionaries at foreign courts and political agencies, the Government authorize the use of the British union flag, which is hoisted on a staff erected for the purpose in front of the Resident's house, or, when marching, in advance of the great tent. Moreover, as the representative of his government, the chief was, until lately, expected to keep an establishment becoming his situation; and that his organ of acquisitiveness, under the plea of poverty, should not operate in checking a judicious indulgence in the use of this weapon of diplomacy, permission was given to draw on the public treasury for the amount, whatever it might be, which had been incurred each month for the maintenance of a liberal table. It was not expected, however, that this item would exceed £500 per annum.* These

* We read in Tacitus that when the Germans wished to reconcile enemies, elect chiefs, make alliances, or treat of peace and war, they took counsel during their repasts—"for the mind," ob-

good old times have disappeared, and with them the Resident's hospitality.

When that stern and lanky creature, Reform, stalked abroad in all the hideousness of a raw-boned starvling, she could listen to no plea that had not cheapness for its recommendation; and having always herself existed on half a meal a day, she could ill brook the idea of others faring better; so with a burst of virtuous indignation, she declared the term "table allowance" abhorrent to her sight; and with a dash fearful in its consequences to those around, the *k'hana peena* dustoor was at once annulled as the grossest and most glaring of abuses. "There are," says Tacitus, "some virtues which are odious; such as inflexible severity, and an integrity that accepts of no favour;"* while La Bruyère declares "a man may have virtue, capacity, and good conduct, and yet be insupportable. The air and manner, which we neglect as little

serves this shrewd commentator on human nature, "is then most open to the impression of simple truths, and easily excited to great undertakings." The head is ever the dupe of the heart.

* Quædem virtutes odio sunt; severitas obstinata invictis adversum gratiam animus. Tac. A. xv.

things, are frequently what the world judge us by, and makes them decide for or against us."

These maxims of two men thoroughly conversant with human nature were voted unintelligible by Reform, who never swerved, as she thought, to the right or the left in her onward beatific course. A stern integrity of purpose in public life, although sounding vastly well in theory, when put in practice is found to be a poor lever in the manufactory of friendship; and I believe that now, if the truth could be got at, we should find that some of the warmest supporters of the "table allowance" abolition act, would gladly see the order for its continuance restored. Be that as it may, by an extraordinary act of forbearance, the incumbents were in this instance permitted to continue to draw the *spirituous* allowance as long as they remained in office. As a vacancy occurred the grant, as a distinct item, is to be disallowed for the future, and the salary fixed as a consolidated allowance.

The Saugor and Nerbudda territories are divided into eight divisions—namely, Saugor, Hutta, Reylee, Jubbulpore, Nursingpore, Seonee, Hoshingabad and Baitool. The whole have been ceded

to us within the last twenty years. The fertility of some of these divisions is extreme, while others again are barren, and scarcely pay the expense of administration. Nursingpore and Jubbulpore may be taken as instances of the former, while Seonee and Baitool fall under the latter description. The net revenue, after deducting £97,000 as the charge for management, is estimated at £353,000 per annum. This amount has of late years considerably fallen off, from causes which I shall speak of hereafter. The amount realized in 1820-21 by the government was £838,440 sterling, calculating the rupee at two shillings, which is a trifle too much. In that year, however, arrears from January, 1818, were brought to account, amounting to £385,532, consequently the actual revenue of 1820-21 was only £452,908, which exceeded in a trifling sum the estimate for that period. I take the income of these years, because the management of the country had then only been in our hands a short time, and it therefore serves, when contrasted with the present time, to show the dreadful falling-off which has been experienced. The gross receipts

do not now amount to more than half the estimated amount of 1820-21; that is to say, the income does exceed £240,000. It is unnecessary to enter into an inquiry of the causes which have occasioned this depreciation. They will be fully discussed elsewhere, and their introduction can only lead to a repetition of the arguments which will then be adduced.

Luckily the time of the political assistants in charge of divisions is so fully occupied that they have no leisure to watch its flight; otherwise their situation would be a most unenviable one. Perfectly isolated from all European society, they have no person with whom they can discourse excepting the native officers of their court, while in case of illness some are obliged to send a great distance for the medical attendant. The Hutta house is 64 miles from Saugor, while the Reylee residence is 29 in another direction. The assistants of each of these two divisions in case of sickness were obliged to send to me, who resided principally at Saugor, on account of the greater necessity which existed for my professional services there.

At all these distant stations detachments of

infantry and cavalry are quartered, under the command of their respective native officers. Thus at Hutta there is a full company of sepoys under their subadar; at Reylee, one of less strength, under their jemadar, while the horse are commanded by a russeeldar. The sepoys have to mount guard over the Treasury and the Residency House; while the mounted soldiery give an escort of two men as a body guard whenever the Political Assistant rides or drives abroad. Moreover, they are of essential service in pursuing robbers, and prove themselves to be excellent mounted police. Every morning the respective commandants of these detachments wait on the assistant to report that all is well.

At these stations, that is Hutta and Reylee, there is a native doctor, under whose immediate charge the medical duties of the gaol and other establishments fall. Unless the European officer or any of his family happened to be ill, my visits were merely periodical. Every week a report, in Persian, was forwarded to me by the resident Æsculapius, detailing the treatment adopted by him in the management of any new cases, as well as

the nature of each complaint. At Hutta the average numbers of prisoners in confinement are 62; at Reylee, 40; at Saugor, 784. The European political officers in charge of the other divisions of these territories, have an entire corps, or nearly so, with them. At Jubbulpore, where the Commissioner usually resides, there is a regiment of infantry, and one also at Baitool; at Hoshingabad, a wing; Nursingpore, or, as it is sometimes called, Gurrawarrah, a whole regiment; and at Seonee three companies, with an assistant surgeon and European officer.

The management of these territories affords a striking illustration of the influence of moral power over the native mind. Take Huttah, for example. The entire length of this division, from N.E. to S.W., is sixty miles; while its breadth from East to West, is forty-five miles. It contains three principal towns and two smaller ones, besides villages.

	Inhabitants.
By the census of 1823, the town of Huttah contained	9097
That of Dummow, which is the most ancient in the Division	7005
Hindoore	5405
	21,507

	Inhabitants.
While the entire population of the Division amounts to—Mahomedans	5,639
Hindús	150,858
Total . .	156,497

The number of males was 83,608; of which 33,868 were under the age of fifteen. The total number of females was 72,889; of which 24,998 were under the age of thirteen. The proportion of Mahomedans to the whole, being as one to twenty-seven. The division is subdivided into ten Pergunnahs, or districts, in which there are altogether 512 inhabited places.

Here, then, we have a division, or what the English reader would understand better as a county, containing a population of one hundred and fifty-six thousand, four hundred and ninety-seven inhabitants, whose government is regulated by a single European officer, at a station sixty-four miles apart from any of his countrymen, and a treasury under a native guard, in which there is seldom less than £9000; and yet, since the transfer of these states by the Mahrattas, in 1817-18-19, only one instance of outrage on the person of the political officer has occurred. This happened at Seonee, in

1828. Dr. Steven, the Political Assistant in charge of the division, was sitting as usual in court, taking evidence in a case of murder. The native sabre and broad-handled dagger, by which the guilty deed was supposed to have been perpetrated, was lying on the bench in front of him. The prisoners were three lusty, powerful Patans; they stood close by the table, within reach of their victim. The examination was in course of progress by the court, the evidence which had been adduced being strongly corroborative of the guilt of the parties present; whether it were a plan previously concerted or not, could never be ascertained, in consequence of the events which ensued, but by many it was believed to have arisen from the impulse of the moment; the prisoners' ire being raised by the gaze of the presiding judge at a female relative, secluded in a dhooly, who was compelled, as one of the witnesses, to appear before him. Darting at the dagger as it lay carelessly on the board, one of the villains threw himself upon the judge, and, with a fatal aim, buried the weapon to the hilt in his body. The assassin endeavoured to escape; but, true to their employers, the native officers of the court rushed in an instant

upon him, and, cleaving him to pieces, he fell lifeless to the ground. His two companions made an effort to escape; but the indignation of the people would not be appeased until they had also paid the forfeit of their lives: they were both cut down before they had fled one hundred yards from the scene of this dreadful murder. Dr. Steven was taken to his room, where he lingered in dreadful agony for thirty-six hours, and then expired. He had no European near him when he died; and before nailing down the coffin, the natives put into it a loaf of bread and a vessel of water. The horrible event caused great alarm at the time; and the Assistants have since taken the precaution to secure themselves by well-constructed panels, which now keep the prisoners at a safe distance.

This outrage not being the consequence of a popular disturbance, cannot be regarded even as an exception to the remark with which I set out, that the influence of moral integrity on the part of one European, was sufficient to maintain the peace of an entire division, and that the government of these territories afforded an admirable illustration of moral power subduing the native mind.

The inhabitants of these districts are impressed with all the superstitious notions of their neighbours. They fully believe, among other extravagancies, that the spirits of the dead reappear on earth in their former form and shape. Any calamity which befals a person after he has given his testimony in a court of justice, is considered to be an infallible proof that the individual has been guilty of the crime of perjury. In some of the divisions, Nursingpore for instance, witchcraft and sorcery are often pleaded in court in extenuation of an offence; but with the Huttites this plea is not known to have been once made. Old women are here again the unfortunate sufferers. A man was brought up before the public functionary at Nursingpore, charged with the murder of an aged female, his neighbour; when asked what led him to perpetrate the diabolical act of which he was accused, he replied, "I long strove against it, but without avail; I never went to my fields but the hag had her evil eye upon me, and by her necromancy (jado) my crops were blighted and my household made sick."

There are evil spirits of several denominations,

who are supposed to exert a presiding influence over diseases, as well as death. Indeed, whenever the latter happens, unless the cause is well understood, the people attribute it to the effect of supernatural agency; a belief which leads them, on the occurrence of any calamity, sickness especially, to seek by every means in their power, that is by offerings and mystical ceremonies, to propitiate the invisible and dreaded sprite.

Different influences are supposed to preside over different diseases: the task of discriminating on such delicate matters belonging to a certain class called Gooneeas. The propitiatory offerings seem to vary according to the caste and sex of the individual afflicted.

The Hindú population of these territories may be classed under three heads: 1st. Brahmins, who are very numerous; 2nd. Lodhees, who are subdivided into eight classes; the Soodra caste of the Lodhees intermarrying with the respectable orders of that tribe; 3rd. The Koormees, who are subdivided into five classes. The last of these three divisions preserve the Hindú usage of not marrying in their own immediate tribe.

Everywhere in these territories the people show a great disregard for life, destroying themselves (the women particularly) on occasions of the most trifling nature. Domestic disputes, or the affliction of an incurable disease, are the causes which most frequently lead to the commission of these insane acts: but suicide is often the result of less direful grievances. Hanging, and drowning in wells, being the favourite methods for carrying such resolves into execution.

When these territories were transferred to us by the Mahrattas, we found slavery very common; and in consequence we still meet with a considerable number of slaves which are distributed over the country.

The government of India, as part of the British administration, have prohibited slave-dealing in all the territories under their dominion. No Hindú or Mahomedan British subject is any longer entitled to a right of property in slaves, should such have come into his establishment since his acknowledged allegiance to the British Crown; but on the transfer of the Saugor and Nerbudda territories, all slaves then in the posses-

sion of individuals, were recognized as private property. So that we still find in many of the houses of the Thakoors and other feudal chiefs of Central India, a great portion of the domestics in the condition of slaves.

If half the harrowing details which are recorded concerning the treatment of slaves in the western world be true, they form an extraordinary contrast to the conduct pursued towards them in the eastern hemisphere. As I have elsewhere remarked, no people are so faithful to the hand that feeds and rears them as our subjects in the East. Satisfied with the gratification of their daily wants, they seek not to disturb the tranquillity of the present moment by any dismal contemplations of the future —their condition while in bondage, as far as their physical necessities are concerned, is generally much superior to that which they experienced when in a state of freedom. They have now no care for the morrow; their daily occupations are easy of performance; their masters and mistresses usually lenient to a degree; they have plenty to eat and sweet water to drink, and are contented, perhaps I may add happy, ready on any emer-

gency to stand forth in defence of the cause of the master on whose salt they exist.

So convinced are the indigent portion of the population of the superior advantages which the slave enjoys, that, when forced, upon occasions of partial or general calamity, to traverse the country in droves, seeking for the wild berries of the jungle wherewith to satisfy the cravings of hunger, they feel content if they can find rich men to buy their children and take them into their establishments. In those parts in which our jurisdiction does not exist, slaves are still procured. On the coast many Africans were formerly imported, but that trade has long since ceased. From Abyssinia a few are still annually brought into India for the service of the great Eastern potentates. The Hubshees are chiefly eunuchs, and are employed exclusively about the persons of the principals themselves.

In addition to these domestic slaves we found, on coming into possession of the states on the Nerbudda, a class of slaves who were considered public, that is to say, who were claimed as the property of the state. These were generally

women who, having in consequence of infidelity been turned out of their caste, were adrift on the world, and being taken by the local officers, became, with their offspring, their own pledges for the provision which the government made for them. Up to the year 1820 these unfortunates were sold by the local officers as public property, if not by regular auction, yet by something very like it, the highest offer made at the time being accepted.

The rural population of the Saugor and Nerbudda divisions are temperate, frugal, industrious, peaceable and orderly. Among them great crimes are unfrequent, but on the other hand they are inexorable creditors, totally regardless of truth in matters in which their own interests are concerned, and unfeeling to a degree. The use of opium, intoxicating drugs, or spirits, seems in some districts to be entirely confined to the lowest classes, or to rare and solitary instances of individual debauchery. In the Hutta division tobacco-smoking is by no means a common habit. Many leading classes do not smoke at all, and amongst the more respectable inhabitants generally an

excessive fondness for this indulgence is extremely rare.

The established character for frugality which these people possess is entirely and universally set aside on one occurrence, and that is on occasion of their children's marriage. At these seasons they launch out into an expenditure as extravagant as it is inconsistent; oftentimes involving themselves in such pecuniary difficulties that they are never afterwards able to extricate their affairs. At such times as these, reason appears to have lost all control over their senses, and, as if mere creatures of the day flitting in butterfly plumage to droop and expire at night, they give way to every blind and sensual impulse, heedless of the past, and utterly regardless of the inevitable misery of the future. After this the reader need scarcely be told, that love of offspring is a prominent trait in the character of these people.

Notwithstanding the success which attended the campaigns undertaken by the Marquis of Hastings against the Pindarrees, and the security which the utter demolition of these marauding hordes gave to the kingdoms of Central India, the establish-

ment of a permanent government and the cessation of an almost exterminating war, do not appear to have occasioned an increase in the population of the Saugor and Nerbudda divisions. This may be attributed in part to physical causes. The frequent calamities of season which here occur are to the agricultural classes, who *en masse* are a miserably poor set, and constitute seven-tenths of the entire community, a cause of a great decrement of life.

When a blight pervades their crops, or a shower of locusts (*Gryllus migratorius*) eat up their corn, or a hail-storm beats it down and destroys it, the husbandmen have no means of support excepting from the wild products of nature. At the best of times nearly the whole of their wheat and gram go to pay their k'hists (revenue instalments), while they themselves, with their families, live on the cheap and less wholesome grain, called juwar, badjra, kooda and kootkee. Causes which, when properly considered, will sufficiently explain the reason for the population, numerically speaking, continuing so stationary.

The women, especially those in the large towns,

have inviting figures, with an erect and elastic gait. No man can have lounged at a ghât, or ridden through a town, without being sensibly struck with the pleasing gestures and graceful actions of the softer sex; and did they possess faces only half so attractive as their persons, the hearts of the gazers would be in imminent danger. Corset makers find no employment in India, and yet the ladies of Hindústan possess forms which cannot be surpassed. When they have the advantage of a pretty face, in addition to their well-developed person, it is only just that they should lord it a little over those to whom Nature has not been so bountiful.

The extraordinary degree of gracefulness and elasticity displayed by these women may be attributed in part to an artificial cause, although a corset, as I have just remarked, or anything resembling it, is, I believe, unknown to them. From their earliest childhood they are taught to carry vessels on the head, and, as they grow up, a daily morning visit is paid to the village or town well for a supply of water, which is always brought home by the girls in earthen jars, thus poised. This exercise has the

effect of bringing all the muscles of the back into action, and consequently strengthening the spine; while the chest is thrown forward and expanded. We see no crooked backs, or shoulders, out in Hindústan. This employment teaches them, as they walk, to permit the centre of gravity to fall on the middle of the foot, giving them, as they go along, a firm and upright gait.

I have long been of opinion that this course, if followed by the persons conducting boarding-schools at home, as a calisthenic exercise, would be infinitely more effectual than the method now pursued, to give tone and muscular powers to the delicate frames of young females; and the benefits derivable from it would, I think, be so apparent as to supersede the present machinery of dumb-bells, back-boards, hoops, and skipping-ropes. In order to secure the success of the undertaking, it will be necessary to model the jars employed in strict accordance both in size and shape to the *lotah* and *gurrah* used in Hindústan. The former is made of brass, and contains about a pint; the latter is earthenware, and varies in size from a quart to a gallon. The following sketch will convey to the reader an idea of the forms of these two vessels.

They might first be poised on the head, and then carried forward and backward filled with water, by the assistance of one hand only. After a steady upright step has been attained, the bearer should make the attempt without the assistance of either hand, and in six months, I have no doubt, a manifest alteration for the better would be discernible.

I have already remarked upon the great fondness which the parents show for their children in these provinces. When young they are left almost entirely to the management of their mothers, who, unfortunately having had no education themselves, are unable to instruct the minds or govern the passions of their offspring. The father of a child is sufficiently absolute in power, but instead of being led to a steady and firm exercise of his prerogative, by a wisely-directed desire for the improvement of his son, undisciplined parental

affection frequently makes him forget it in injurious indulgence, until, some day, it is called forth with altogether disproportioned severity by a sudden fit of anger. Riding through the town of Saugor one day, I heard a tremendous outbreak of screams, which soon subsided into a loud cry. As I came up I discovered the grief to proceed from a little urchin who had been castigated by his father for some grave offence. The parent was sitting, or squatting more properly speaking, most composedly in the door-way of his shop, smoking his hubble-bubble, watching the young one, who, as if indignant at the indifference displayed by his parent to his wailings, kicked and stamped the pavement with all the force he could muster.

The Mahratta women do not observe the precaution of veiling on going abroad. At Saugor the Ranee who, to judge from her present appearance, must have been a fine woman in her day, enjoys the air in an open palankeen. Little if any intercourse takes place between this lady and the English female residents at Saugor: an occasional visit of ceremony from the wife of the political officer being the utmost that passes between them.

Among the rural portion of the female community a custom is followed, highly pleasing to the feelings of the individual for whom the honour is intended; and as the act, in the instance I am about to relate, which was the occasion of my first being made acquainted with it, was altogether a spontaneous one, it could not but have been so considered by the gentleman himself. Indeed I can conceive no tribute of respect more flattering to the vanity of man.

It is well known that the British government have long since prohibited the exaction of those observances from their Hindú and Mahomedan subjects towards their superiors, which their forefathers were accustomed to pay to their sovereigns. On reaching the precincts of a hamlet one morning early, in company with the Political Assistant who then held charge of the Saugor division, I was surprised by the number of young girls whom I saw congregated together at the corner of the village lane, as if waiting our arrival. Each carried on her head a small brightly-scoured brass lotah, containing different herbs and flowers. No sooner had we approached this assembly, than

striking up a soft and melodious chant, they took the lead, and moved steadily on in front of the majestic elephant on which we were seated. Nor did they quit us till we had passed through their village, and had fairly emerged on the opposite side, when, drawing up by the roadway, they saluted us after the manner of their country and retired.

On inquiry I learnt that the ceremony we had just witnessed was one which had been of common occurrence in former times, and that the villagers, as a token of respect, sent their daughters, bearing offerings of sweet-smelling flowers on their heads, to welcome with glad assurances of joy the arrival of their burra sahib, or lord, and that the procession I had witnessed was the renewal merely of a custom now fast falling into disuse.

Before I close my remarks on the peculiarities of the people in the Saugor and Nerbudda states, I must not omit to mention a race of native mountaineers, called Goands, who live in the hill jungles of Central India, particularly the southern parts. The Goands observe manners and customs which are peculiar to themselves,—their physiognomy

partakes neither of the intelligence of the Mahomedan nor the effeminacy of the Hindú. They have hard-set features. The lips, particularly the upper one, thick; a receding forehead, and a general unintellectual expression of countenance. The skin is very black. The hair on the head thick, short, with an approach to woolliness, offering, in short, in their external physical characteristics, a striking resemblance to the well-known features of the African. The distinction between them and their Hindú brethren of the plain is so remarkable, that no one can mistake a Goand at first sight. They are generally of moderate stature, that is to say, from five feet six to five feet seven inches; with well-developed and athletic bodies. Their enunciation is voluble and energetic, and their gestures vivacious. Their principal food is coarse rice, kooda, and kootkee (thin impoverished pulse), but they eat snakes of all sorts, wild-hog, deer, wild-fowl of all kinds, cows, bullocks, and monkeys.

In the wild unreclaimed jungles in the eastern part of the Jubbulpore division, stretching along to the far-famed hill of Oomercuntuc, into the Nag-

pore districts of Bustar and Chutteesghur, these people are no other than savages, and wander about when and where inclination prompts. They recognize a chief; and many extensive tracts of country are still held by Goand Rajahs. The Rajah of Bustar, in the Nagpore kingdom, is a Goand. These people are cannibals, and like the Kookees of the Blue Mountains of Chittagong, of whom an account has been given in the early part of this work, *they sacrifice and eat their fellow-creatures!* The fact of their doing so is so well attested, that there can be no doubt, I think, of its correctness. Captain Crawfurd, of the Bengal artillery, held for many years the sole jurisdiction of the Chutteesghur division of the Nagpore kingdom, and had ample opportunity of verifying the circumstance, and he has distinctly assured me of his thorough conviction of its reality. He says, "A caste of Goands reside in the hills near Bellaspoor (Nagpore kingdom). The caste is called Bhenderwar, perhaps from their eating monkeys.

"In January, 1828, Mr. Wilder, the British Resident at the Court of Nagpore, over which he held the entire political control, came to Chuttees-

ghur, on which occasion the Rajah of Bustar went to pay his respects to him. This man had previously vowed to Devi, that, if he should obtain a favourable meeting with the Resident, he would offer up twenty men. The wished-for interview proved auspicious, and he returned back to his own country satisfied. In September of the same year (1828), he fulfilled his vow, and sacrificed twenty of his fellow-creatures: they were principally labourers employed on his own fields, a few only being travellers from Hydrabad and Chanda.

"When an offering of a certain number of human victims is to be performed, the unhappy wretches are congregated together, and kept without food for three days. On the fourth and last of their existence on earth, they are shaved all over, then bathed and rubbed with oil, after which they are led out to the image of Devi, whom they are made to worship. After this performance has been gone through they are conducted to a neem tree, close by which there is a hole, and on the edge of this they are sacrificed. The Goand Poojaree takes the knife out of the temple of Devi, and cuts off their heads. The inhabitants and

priests of the temple immediately take up the bodies and bury them. For three days afterwards the door of the temple is shut, and no worship performed in it during that period. In the reign of the father of the present Rajah, only one man was sacrificed during a period of three years, but now many are offered up.

"In 1828, apparently at the time in which they were collecting victims for the above-mentioned sacrifice, two brothers, Bunjarees, halted at a place called Bondra, an agent of the Rajah, employed for the purpose, seized one of them, and sent him to his master. The other in the meantime offered two hundred rupees to the agent to let his brother loose, and upon his refusal begged that he might also be sent to the Rajah. The agent told him, that if he went he would only meet with a fate similar to that for which his brother was destined; and refused either to take the money or to meddle farther in the affair. Upon this the man departed in great distress, and assembled his Bunjaree brethren to the number of one hundred, or one hundred and twenty-five, who all proceeded in a body to the Rajah at Jugdulpore, threatening to com-

plain to government (meaning the British Resident at Nagpore) if their kinsman were not given back to them. Seeing that the Bunjarees were so determined on the matter, the Rajah went in person to the place where the man was confined, and delivered him up to his friends.

"I have other accounts besides these,—one, given by a man who was himself seized in Colonel Agnew's time (referring to the period when Colonel Agnew managed the affairs of the country), but who escaped by showing a paper with the government seal on it, and a bit of old English newspaper, which he succeeded in inducing his captors to believe would occasion inquiry to be made after him.

"This individual further informs me, that four men are murdered, one at each corner of the Rajah's car, whenever he mounts it on a state occasion. At the same time with these human victims, goats and buffaloes are also sacrificed. He adds, that they are particularly fond of killing men of the Jungum caste; esteeming the smallest portion of their bones and flesh to be very effica-

cious in improving their crops, when buried in the fields; and that the Gouteeas (heads of villages), whenever they can find a safe opportunity, seize and sacrifice human victims for this purpose. These details, he assures me, he received from the people of the country, who warned him to fly."

This testimony alone, from a gentleman so well qualified to give information as Captain Crawfurd, is sufficient to establish the fact of these people offering up the lives of their fellow-creatures in sacrifice to their goddess. And having once satisfied our minds on that point, we can readily give credence to the following horrible details of their cannibalism, by Lieutenant Prendergast.

This gentleman says, that he learned, "after much trouble, that there was a tribe of Goands, who resided in the hills of Oomercuntuc, and the S. E. in the Gondwarra country, who held very little intercourse with the villages; and never went into them except to barter or purchase provisions. This race live in detached parties, and have seldom more than eight or ten huts in one place. They are cannibals in the real sense of

the word, but never eat the flesh of any person not belonging to their own family or tribe. Nor do they do this except on particular occasions.

" It is the custom of this singular people to cut the throat of any person of their family who is attacked by severe illness, and who they think has no chance of recovering; when they collect the whole of their relations and particular friends, and feast upon the body. In like manner, when a person arrives at a great age, and becomes feeble and weak, the khilalkhor (butcher) operates upon him, when the different members of the family assemble for the same purpose as above stated. In other respects this is a simple race of people. Nor do they consider cutting the throats of their sick relations, or aged parents, any sin, but on the contrary, an act acceptable to Kalee,* a mercy to their relations, and a blessing to their whole race."

" We descended the Oomercuntuc hills,"† con-

* This goddess is also worshipped under the name of Devi, Doorga, and Bhowanee. She is considered to preside over small-pox, cholera, and all other pestilential diseases.—H. H. S.

† The hill of Oomercuntuc, which I believe is at an elevation of 3500 feet above the level of the sea, is celebrated as giving rise to two important rivers; viz. the Nerbudda and the Són. The former of these, taking its rise at the summit, falls over the

tinues my authority, "on the evening of the 24th May; and not being able to get a kooppa to hold the oil for the mushal, or flambeau, and my musalchee being absent, I had some difficulty in procuring a chattee, owing to supplies of any kind not being procurable on the hill; into the vessel about three and a half seers (3½ quarts) of linseed oil were put, for the use of the flambeau, which was carried by one of the cannibal tribe in one hand, while the chattee was held in the other. This oil was obtained for me by the head fakeer, an old man, who had resided at the source of the Nerbudda for years.

"The hill being very steep and rugged (giving rise to some beautiful waterfalls), we halted at the foot to rest our people and cattle, having nothing around us but a mass of thick and heavy jungle.

western face and flows in that direction to the sea, while the latter streams down the eastern side, and in a very meandering course eastward through the provinces of Boglekund and Bahar, falls into the Ganges. A small cistern, presided over by a fakeer, on the top of this mountain, is common to both these rivers. Bamboo pipes, pointing east and west, give direction to the primitive waters of these two great streams. The whole of the mountain is one mass of dense jungle; and yet an English lady has had the courage to ascend to its summit. —H. H. S.

The flambeau was placed on the ground, and my friend the cannibal near it in charge of the oil.

"After a halt of about half an hour, we prepared to start, and I called to my guide and mushal friend to get ready, but was surprised to learn from my moonshee that the Goand had drunk the whole of the oil! and that as none could be procured where we then were, we must make the best of our way in the dark. I called for the Goand, and asked him how he could bring himself to drink such vile stuff; and, although excessively annoyed at being left in the dark, I could not suppress a laugh when he told me, 'that having seldom an opportunity of getting a good drink of oil, he could not resist the temptation, owing to the savoury smell wafted from the flambeau to his nose.' On questioning him about killing and eating the sick and aged of his tribe he did not deny it, but said, 'it was an ancient custom of theirs.' I asked him, if he would eat the flesh of people not belonging to his tribe, when with visible marks of anger and disgust he replied, 'No—I never eat of any person not belonging to my own tribe.'

"These people form cisterns of bamboo and

mud in the most accessible parts of the forests, which during the rains are filled with water. In the dry season, should their scanty supply run short, they remove to a more convenient place, or to a cistern that has not been used; for each family form a number of cisterns, sometimes several miles distant, to supply their wants, as well as to facilitate their flight, should any unwelcome guests approach their dwellings."

It does not appear that the Goands build their habitations in the trees, to be cradled by the storm, in the manner of the Kookees of the Blue Mountains of Chittagong, but they have recourse to a plan very much allied to it. They build *michauns*, which are bamboo erections, sufficiently lofty to protect them, when asleep, from the ravages of their companions, the panthers, lions, black bears, and tigers. In one of the early chapters I gave a sketch of a michaun, which I fell in with during my passage through the Rajmahal jungles, and which the reader will perhaps remember was tenanted by an old man, who called himself "the jemadar of the jungles."

During my residence at Saugor, I once set out

on a fishing excursion, and passed three weeks among the Goand villages in the Reylee hills. Among them cannibalism was unknown; and I was assured by the political officer, under whose jurisdiction these mountaineers fell, that they were a peaceable and industrious race. It is only with certain tribes of Goands, such as inhabit the wild and unreclaimed hill jungles of Nagpore, that human sacrifice and cannibalism are practised.

By many, the Goands are considered to be the true aborigines of India; and certainly, if we are to believe the assertion, that the Druids are an off-shoot from the Indian Gymnosophists, we find such a striking similarity in many respects between the habits of the present race of Goands and the accounts handed down to us of the doctrines of the Druids, that the hypothesis of these people being the primitive tribe of India, receives wonderful support. However, this is a subject more suited for the closet of the philosopher than the amusement of a general reader; and, therefore, I leave the merits of the question to be discussed by those who are better acquainted with the subject.

CHAPTER V.

Gaols—Inefficiency of the Discipline—Thugs—Mode of catching them—Mode of Sentencing—Levity of conduct before Execution—Phrenological Opinion of the Skulls.

WHEREVER there happens to be a civil station in Hindústan, a gaol is sure to be found. While residing in Central India, five of these establishments fell under my charge. How far the civilized notions of English legislators have contributed to the moral improvement of our benighted brethren in the East, although a question of great importance, and easily asked, is by no means so readily answered. If the gaols be taken as a criterion whereby to judge of its effects, I fear the admirers of Calcutta regulations and codification have not much to be proud of. The fault lies in the system itself, rather than in the arrangement of its details.

The prison discipline of Europe or America is inapplicable to Asia. The principles of criminal legislation, to be useful, must be founded on the

relative state of a nation's sensibility, and not in reference to man as a genus. Human happiness or misery is resolvable into the gratification or non-gratification of one or more of our mental faculties, or, of the feelings connected with our bodily frame. The sensibility of man's natural or inborn character must depend principally on the climate and products of the soil in which he is placed. Consequently, to apply that punishment to a Hindú or Mahomedan, who as a body are immeasurably inferior to us in the scale of civilization, which s found suited for an Englishman, is, I humbly conceive, a fundamental error in criminal legislation.

No people, I readily admit, are more sensitive of their good name than are the higher classes of our Asiatic subjects; but it is not for them so much as for the poverty-stricken thousands who are daily perambulating the country, that penal enactments are required in Hindústan. And to punish such with discipline calculated to reclaim an English miscreant, would be no punishment at all. The views of the one are limited to the actual animal wants of the day; while the other, on the contrary, possesses an active intelligence, and may

be morally made to feel and suffer by the measures pursued for his chastisement and reform.

The British prisons of Hindústan, without including the Peninsula of India, hold in confinement, throughout the year, several thousand souls, perhaps if I say 30,000 I shall not be far from the truth. These unfortunates, for the most part vagabonds from the lowest rank of society, have of course to be fed and clothed at the public expense: when, therefore, we come to consider the primitive mode of life which most of them have been accustomed to lead before their incarceration, their precarious existence, and non-intellectuality, we cannot but feel that so far from the prospect of an English prison acting on their minds as a restraint, it becomes a very serious question indeed, whether the certainty of getting provided with a sufficiency of wholesome food every day, and two warm blankets to cover them at night, do not positively operate with many as a premium on vice. That the surrounding independent native states regard our principles of criminal legislation as inefficient, is evident from the fact of their ridiculing it in the manner they do. But preferring to spend

their money on more worthy objects, they do without gaols, and keep down crime by other and more summary punishments.

Then, again, what degree of labour do we exact from our prisoners in payment for their keep? The reader will be surprised, perhaps, when he is informed, positively none. Those whose crimes have been somewhat more heinous than ordinary, are sentenced to labour; and, in consequence, are put on the roads for four or five hours a day, but with this exception (which is only the semblance of hard labour), and the working of the shuttle occasionally within the walls, the whole time of the convicts is passed in indolence.

In the Saugor gaol there were from 700 to 800 in confinement; at Hutta, from 60 to 120; and at Reylee, 80. The reason of there being so large a number of prisoners at the first-named place, was owing to the gaol at Saugor being made the receptacle, as I before remarked, for those human monsters called Thugs, of whom I shall speak in full presently. To keep the wards as free from sickness as possible, I suggested to the Political Assistant the propriety of ordering the whole

of the prisoners out to work on the public thoroughfares, whenever the weather would permit. The recommendation was attended to, and the consequence was the formation of those excellent *lava roads* which have been alluded to in a former chapter. Space will not permit me to go into the subject of gaol discipline in the manner I could wish. This much may be safely said, there is great room for improvement.

Then as to the receptacles themselves: as if to extract as much money as possible from the treasury of their well-disposed employers, the builders' whoever they were, have, in the erection of the gaols, incurred an expense in the outlay of at least double the amount that was necessary. Such masses of brick and mortar; costly, yet so confined, without taste, judgment, or utility, were perhaps never before presented to the eye. As for drains, I have never seen an effective one yet. I leave the reader, therefore, to picture to himself the state of things on a morning at day-break, when the crowded cells of these establishments are first opened. No extravagance of the imagination, I can assure him, can exceed the reality; and this,

too, after the enormous expense to which the government have been put. In short, the respiration of prison-air in Hindústan is, in point of fact, the only punishment, after personal restraint, which those in confinement can be said to endure.

I now come to that extraordinary class of our fellow-creatures whose deeds of blood have been for some time past the wonder and astonishment of every circle in Europe; I allude to the gang-murderers of the East Indies, commonly called Thugs. Soon after Lord William Bentinck entered on his duties as Governor-General, the Indian government came to the praiseworthy resolution of taking active measures for the extirpation of these villains from the face of the country. By some it may be asked, How they were ever allowed to spring into existence? The explanation is easy. It must be apparent to all, who reflect for a moment on the subject, that a country which has been for centuries the theatre of anarchy or misrule, can offer no internal security for the protection of the property or the persons of isolated individuals. Where escape or evasion from detection is easy, crime, in its worst form, is sure to abound.

With this rule for our guide, we need not be at a loss to account for the frightful head to which the crime of Thuggee has reached in India. The supremacy of the country, it is true, has been in the hands of the British nation for upwards of half a century; but it is not in half a century, especially the first half of coming into power, that the peace and safety of the people of such a vast empire as British India can be effectually secured. Hence the Thugs have till within the last six years been permitted to carry on their trade with little or no molestation.

The fact of murder being committed in a wholesale manner in the interior, came to the knowledge of the Calcutta Council as early as the years 1809 and 1810, by the discovery of upwards of thirty bodies in the different wells of the Dooab*. But then this province had only just come into our possession, and police matters were neglected for those of more paramount moment. The subject was, therefore, lost sight of; and although casually ad-

* Dooab means, literally, two waters, and is applied to that province which is situated between the waters of the Jumna and Ganges.

verted to in the periodical reports of different commissioners, no extraordinary efforts appear to have been made on the part of the government to detect or bring the culprits to account.

Many, very many Anglo-Indians were indeed sceptical as to whether such beings, as the Thugs were described to be, were really to be found; believing that, if they did exist, it could only be in the *ill-regulated* territories of the adjoining native princes. That thousands of practised murderers, organized into a brotherhood, and bound to each other by mysterious but indissoluble rites, and who held a language only known to themselves, should be congregated at all seasons in every class of society, whether Anglo-Indian or native, and so well initiated in their bloody calling, that, however far apart the residence of two Thugs might be, yet, they no sooner encountered each other, than immediate recognition should follow,—was indeed little suspected; since such a state of things could not enter the imagination of persons living under an efficient government.

The histories of Germany, Spain, and Italy, harrowing as are their details of cold-blooded slaughter,

offer no counterpart equal in atrocity or extent to the horrible murders which have come to light in the prosecution of the Thugs. Even the fanciful achievements of the notorious Rinaldo Rinaldini, or the black-leagued assassins of Germany, sink into insignificance when placed side by side with the deeds performed by these Thug monsters of the East. Lord Bentinck's resolute conduct, therefore, in determining to suppress Thuggee, forms a noble act in his administration.

Captain Sleeman was appointed by Lord Bentinck to devote his time especially to the apprehension of Thugs; while Mr. Smith, his Lordship's representative in the Nerbudda territories, was charged, in his official capacity as judge, with the important duty of trying and sentencing them*. Saugor gaol is made the depôt for the reception of these miscreants; and, on my taking charge of the establishment in 1831, I found no fewer than five hundred and eighty-three already in confinement, with cart-loads of fresh ones coming in every week.

To set at rest the question of the possibility of

* Captain Sleeman is now at the head of the department, as "Superintendent-General for the Suppression of Thuggee," with a number of young military officers under him as assistants.

all the individuals convicted being Thugs, I will state the mode adopted in apprehending and convicting them. At the onset, *undoubted* evidence was with difficulty procurable; but that impediment was soon overcome by gaining over one or two of the most notorious as approvers; so that now, when a party are apprehended, the cry is '*sauve qui peut*;' and every one tries to be admitted as king's evidence. These approvers are assured, that, provided they disclose every act of their nefarious life, they shall escape hanging. This leads to a detail of different expeditions in which they have been engaged on the various great thoroughfares of India; and, among other things, to the description of the places in which the bodies of their victims are deposited. As soon as their stock of information is exhausted, fresh men are admitted as approvers, and their evidence also recorded. These individuals are subsequently marched, under a guard of soldiers, to the identical spots, sometimes hundreds of miles apart, in which they have described the bodies of the murdered travellers to be buried.

The officer of the guard, and the attendant

moonshee, are directed, on reaching the place, to call upon the nearest chief village authority, to be present at the opening of the graves, to attest the correctness of the approvers' evidence. Matters are generally found to be exactly in accordance with the previous statement, and very often the identical tool or implement which the Thug has declared that he has thrown into the pit among the dead bodies of his victims, is discovered in their exhumation.

I once accompanied a party of Thugs in a search of this kind. They pointed out with the greatest accuracy the spot in which, twelve years before, seven unfortunate travellers had been murdered by them. On clearing away the ground in the gorge of a hill, a little off the path, the men immediately turned out the skulls and other bones. On another occasion, Captain Sleeman's tent was accidentally pitched on the very grave, and before the bodies could be exhumed the carpet had to be removed. This, then, is one convincing proof of the correctness of the evidence, and the next is equally conclusive. As soon as two or three approvers were obtained, by means of a little ju-

dicious management, the one caste was set against the other, so that however much disposed these men might be to save their own relatives or caste, the jealous opponent is now sure to *peach;* and as a *free* confession was the stipulation on which life was to be spared, these men dare not withhold the names of any of their friends — their ostensible occupation, and residence.

When this information is obtained, a second party is dispatched to seize their denounced companions, and to search their houses. The mounted soldiers and infantry sepoys acquit themselves most ably when on this duty. Marching in disguise, they are never suspected; and as soon as they arrive in sight of the village inhabited by the stranglers, they hide themselves till dark, and then move on. Under cover of the night the village is effectually surrounded by the troopers and a part of the infantry soldiers, while the remainder make the best of their way into the interior.

Having by this means made security doubly sure, the head man of the place is called on, and desired to point out the particular houses of the men who are named; this information is no sooner

obtained than the dwellings are unceremoniously entered, and the Thugs generally secured. Should the Jemadar of the village have pointed out the wrong house, with a view to afford the culprits time to escape, they are sure to fall into the hands of the piquets, who are on the watch outside. By the time that these fellows are properly secured, the town or village community is in a pretty general uproar, at the horrifying idea that their next-door neighbours, Gunga, and Sooper Singh, Hosien Ali, &c., should turn out to be Thugs, and they not know of it.

In the houses of these miscreants, property to a considerable amount is generally found; consisting of Venetian ducats, pearls, diamonds and other precious stones, Spanish dollars, valuable swords, shields, Cashmere shawls, and the rich manufactures of Benares. So extensive has been the amount of this recovered booty, that after returning to the representatives of the murdered travellers all that was justly proved to belong to them, the diamonds, pearls, emeralds, Cashmere shawls, shields, swords, Venetian ducats, and Spanish dollars, sold for the benefit of the government,

have realized a sum sufficient to pay for the erection of two new prison-houses at Saugor, as well as all other incidental charges up to the end of the year 1834. These circumstantial proofs, coupled with the conflicting testimony of their companions, who were present at the murders, together with the different collateral evidence, present a mass of facts too powerful to be rebutted, so that, very often, the prisoner at once voluntarily acknowledges his offence.

George Swinton, Esq., Chief Secretary to the Supreme Government in India, to whom all the reports of the Thug trials were made by Mr. Smith, for the final decision of the Indian government, before the sentences were carried into execution, was induced, previous to his leaving Hindústan in 1833, from the interest which he takes in phrenology, to request Mr. Smith to procure from me the skulls of a few of the Thugs. I presented him with seven heads, which I caused to be decapitated from among a party of twenty-nine, who were executed at one time. At the desire of Mr. Swinton, a descriptive paper was forwarded with these heads. Upon their arrival at Edinburgh, Mr. Swinton

placed the skulls and paper at the service of the Scotch phrenologists; and, with a very complimentary notice, Mr. Coombe inserted the latter in the Phrenological Journal*, together with a supplementary paper from his nephew, Mr. Robert Cox.

Sentence of death was pronounced in a very impressive manner, by Captain Sleeman, on different parties of Thugs, executed during my residence in Saugor. The criminals, drawn up in a semicircle round the bench on which the judge was seated, were surrounded by a strong guard of musketeers and dismounted cavalry. The warrants were placed before them, and each name, as called out by the court, was repeated by the Sheristhadar. At the conclusion of this ceremony, Captain Sleeman addressed them in the Hindústanee language, in a few sentences, which may be rendered thus:—

"You have all been convicted in the crime of blood; the order from the Calcutta Council therefore is, that, at to-morrow's dawn, you are all to be hung. If any of you desire to make any further communication, you may now speak."

* For the particulars of these individuals, I must beg to refer the reader to the Journal of March, 1834.

As a literal translation can only convey a very imperfect idea of the force of the expression employed, I shall make no apology for subjoining the original Hindústanee. "*Khoon men sabit hooa, Calcutta ke council se hookum hye kul bura fujur ke wuqt toom phansee pawega, Jo Tomara jee men kooch khinah hye so koho.*" Few answered; those who did reply merely requested, as a dying favour, that their bodies, on being taken down, might be burnt. One hardened villain, however, as he was turning round to leave the court, disturbed the solemnity of the scene, by muttering:—"Ah, you have got it all your own way now, but let me find you in Paradise, and then I will be revenged!" The night was passed by these men in displays of coarse and disgusting levity. Trusting in the assurance that, dying in the cause of their calling, Bhowanee would provide for them in Paradise, they evinced neither penitence nor remorse.

Stifling their alarm with boisterous revelling, they hoped to establish in the minds of their comrades who could hear them through the wall, a reputation for courage, by means, which, at once, proved their insincerity and belied their fortitude.

Imagine such men on the last night of their existence on earth, not penitent for their individual errors, or impressed with a sense of the public mischiefs to which they had contributed, not even rendered serious by the dismal ordeal which in a few hours was to usher them into an unknown world; but, singing, singing in the condemned cell, and repeating their unhallowed carols while jolting along in the carts that conveyed them to their gibbets!

When morning came, numerous hackeries drew up to the gaol door, taking five men in each. They looked dreadfully haggard. As one cart was laden after the other, it was driven away, surrounded by sepoys with fixed bayonets and loaded muskets. The place appointed for the executions was on the north side of the town of Saugor, about a mile and a half from the gaol. "*Rooksut Doctor Sahib,*" "*Salam Doctor Sahib**," were the salutations which I received, as I rode by the wretched tumbrils which were jolting them to execution. The gibbets were temporary erections, forming three sides of a square. The upright posts which

* Adieu, Doctor Sahib. Compliments to you, Doctor Sahib.

supported the cross-beams were firmly fixed in stone masonry five feet in height. From either side of these walls foot-boards were placed, on which the unhappy criminals were to land on reaching the top of the ladder. The cross-beams were each provided with ten running halters equidistant from one another. As each hackery load of malefactors arrived, it was taken to the foot of the respective ladders, and as one by one got out he mounted to the platform or foot-board. Their irons were not removed. All this time the air was pierced with the hoarse and hollow shoutings of these wretched men.

Each man as he reached to the top of the ladder, stepped out on the platform and walked at once to a halter. Without loss of time he tried its strength by weighing his whole body on it. Every one having by this means proved the strength of his rope with his own hands (for none of them were handcuffed), introduced his head into the noose, drew the knot firmly home immediately behind the right ear, and amid terrific cheers jumped off the board and launched himself into eternity! Thus in the moment of death we see a scrupulous atten-

tion paid to the preservation of caste. To wait to be hung by the hands of a chumar, was a thought too revolting for endurance. The name would be disgraced for ever, and, therefore, rather than submit to its degradation every man hung himself!

The number of executions in the years 1830, 1831, and 1832 amounted to 146, as follows:—

At Jubbulpore in 1830	25
Do. do. 1831	14
At Saugor on the 5th June, 1832 . .	5
Do. do. 10th June do. . . .	15
Do. do. 30th June do. . . .	29
Do. do. 7th July do. . . .	28
Do. do. 30th July do. . . .	30
	146

As the reader may feel curious to know the opinion of the Scotch phrenologists regarding these heads, I shall take the liberty of extracting a part of the supplementary paper furnished by Mr. Robert Cox, the curator of the Edinburgh Museum, and nephew of Mr. Combe.

"One peculiarity is, that destructiveness is not a predominant organ in any of them; and yet they were murderers. This fact, although it might appear to a superficial observer in opposition to

their character, is in reality perfectly consistent with it. When destructiveness is the prodominant organ in the head of an individual, he delights in taking away life from 'ruffian thirst for blood;' but the Thugs murdered obviously for the sake of robbing, and under the influence of other motives immediately to be explained; and also because they had been trained to this mode of life from their infancy. The skulls show that combination of large organs of the animal propensities with comparatively moderate organs of the moral sentiments, which predispose individuals to any mode of self-gratification and indulgence, without restraining them by regard to the rights and welfare of others. The Thugs belong to the class of characters in which I would place the captains and crews of slave-ships, and also the more desperate among soldiers; that is to say, men who individually are not quite so prone to cruelty, that they would of themselves have embarked in a murderous enterprise unsolicited; but who, when temptation is presented to them, feel little or no compunction in yielding to it.

"These skulls are of smaller size than the Euro-

pean average. Circumstances more suitable for the cultivation of the lower feelings and unfavourable for the strengthening of benevolence and conscientiousness, than those of the Thugs, it is impossible to conceive: even veneration and love of approbation, which, when rightly directed, serve to regulate the selfish feelings, are here rendered the prompters of destructiveness and acquisitiveness. It is not merely the size of the organs of these last two propensities that we are to regard; for in many cases the practices of the Thugs are little if at all dictated by them. Dr. Spry states it as his opinion—and the opinion exactly accords with my own conclusion, drawn from the examination of the skulls—that 'many boys go on the roads as Thugs because their fathers do, and not from any inherent ferocity of disposition.' The influence of the priests is very great in leading to the enormities detailed by Dr. Spry. When the *instructors* of the people are men 'not ashamed to declare openly, that untruth and false-swearing are virtuous and meritorious deeds when they tend to their own advantage,' it is far from wonderful that the naturally weak morality of the *instructed* should become

still more weak. Nor is it at all surprising, that the authority of men looked up to with awe, for their promises of eternal felicity, should be very influential in giving life and vigour to the animal propensities.

"The love of approbation is a powerful stimulant to the commission of the atrocities of the Thugs. In a letter published by Captain Sleeman in the 'Calcutta Literary Gazette,' and reprinted in the 'Calcutta Magazine for September, 1832,' that officer tells us 'that after a man has passed through the different grades, and shown that he has acquired sufficient dexterity, or of what we may call nerve or resolution, and which they call 'hard-breastedness,' to strangle a victim himself, the priest, on a certain day before all the gang assembled, before they set out on their criminal expeditions, presents him with the *angocha* or *romal* (the handkerchief with which the strangling is performed)—tells him how many of his family have signalized themselves by the use of it—how much his friends expect from his courage and conduct; and implores the Goddess to vouchsafe her support to his laudable ambition, and endeavours to distinguish himself

in her service. The investiture of the *romal* is *knighthood* to these monsters; it is the highest object of their ambition, not only because the man who strangles has so much a head over and above the share which falls to him in the division of the spoil, but because it implies the recognition by his comrades of the qualities of courage, strength, and dexterity, which all are anxious to be famed for."

Cautiousness is strong and marks the whole of their proceedings. Dirgpaul's head has the organ more developed than either of the others. Dr. Spry mentions that at his execution "his caution prevented him from being too precipitate." The leer of this man was probably the effect of self-esteem. The sexual propensities are strongly developed in the whole seven. Adhesiveness is fully developed. Dirgpaul, who has the largest philoprogenitiveness, spared and adopted an infant belonging to a company of whom every individual was murdered. This is a fine illustration of the independent existence of benevolence and philoprogenitiveness. The developments of individuality and locality correspond with the memory and power of observation which the Thugs manifest.

Dr. Spry tells us that the accuracy with which these men will, after a lapse of several years, point out the spot where the murdered are laid, is truly surprising. "Conscientiousness is in most instances developed only in a moderate degree. The only large conscientiousness is that of Hosein. The whole of Dr. Spry's paper is a commentary on this. In conclusion, it may be confidently affirmed, that so far as our information extends, the heads and characters of these seven Thugs exactly correspond."*

* Phrenological Journal, No. xxxix. Vol. viii.

CHAPTER VI.

Flight of Locusts—Lac Insects—Climate and Diseases—Tropical Tempests—Peculiar Fever—Distressing case—Intermittent Fever—Effects of Quinine—Native treatment—Cholera—Guinea Worm—Treatment.

A FLIGHT of locusts (*Gryllus migratorius*) is so astonishing a sight to an European, that I must be pardoned if I claim, for its description, the place of honour in a new chapter.

We read in the sacred writings of the Divine wrath having been frequently manifested on the offending Israelites, by clouds of locusts, which spread themselves over the surface of the country and devoured the corn; and of all punishments from the hands of an avenging God, man can scarcely conceive one more terrible than this.

It has fallen to my lot to witness two of these awful visitations, but I shall find great difficulty in conveying to the mind of the reader a correct conception of the effect which they produce. A flock

of birds, or a swarm of gnats on a summer's eve, are the utmost which the eye is habituated to see moving in the air, belonging to living nature; so that the mind can scarcely bring itself to believe that it is possible for the entire sky to be filled by a dense mass, formed of myriads of enormously large insects, impelled onward through the air with the impetuosity of a torrent, and a noise like the roar of the distant sea, to the termination of their ephemeral existence; when they drop exhausted to the ground, deposit their eggs, and die. Wherever these creatures light, the whole face of nature undergoes a transformation, from a state of luxuriant verdure, to that of utter sterility. The fields, in a moment, are cleared of every blade and leaf, and all vegetation disappears.

One morning in the month of August, 1832, just as I had finished breakfast, and was engaged in planning some scheme for the disposal of the remainder of the long hot hours of the day, my attention was arrested by an uproar among the servants in the verandah; and, before I had time to step forward to learn the cause of such an unusual occurrence, some of them came hurrying

in, exclaiming, "Tiri! Tiri! Sahib. Tiri! Tiri!" I could only gather from their explanation that Tiri was something peculiar, which had appeared in the sky. Before the sirdar bearer could bring my hat, the bright sunshine disappeared, and the atmosphere became darkened as if by the approach of night. I ran out of the house, and found that I was just in time to witness the onset of a flight of locusts. They came up from the East like a dense black cloud of dust.

The air was calm, and throughout the morning the sun had been shining out intensely hot. The noise occasioned by their approach was exactly similar to the loud but distant roar of the sea. They came on with the rapidity of lightning, and in an instant the whole station was enveloped in a cloud of winged insects, longer and much thicker than the great water-fly of England.

Every rusty matchlock, pistol, musket, and fowling-piece in the town, were put into immediate requisition, followed by a strong supply of brass pans and chillumchees. In short, every device that the emergency of the moment could suggest was adopted, in order to frighten and scare away

these wholesale destroyers. Bang! bang! rap! rap! pop! pop! were heard from every side, intermingled with the tempestuous roar proceeding from the passing torrent of animated nature. The women screeched, the children cried, while the men ran up and down their grounds, making every conceivable noise to keep the locusts upon the wing.

In an hour their fears were at an end—the cloud had passed. Hundreds and thousands, however, fell while passing over Saugor, and many of my people busied themselves in collecting a quantity for culinary purposes. They made them into curries, and assured me that they were a great delicacy. An old Anglo-Indian friend invited a party to taste a locust curry, but I could not reconcile to myself the idea of eating so disgusting a creature, and therefore declined. Those, however, who had the courage to partake of the dish, declared afterwards, that John, when in the wilderness, could not have fared badly as long as he had locusts for his dinner, especially if the wild honey which was coupled with it was similar to that which abounds in our Indian jungles.

Whence these insects come, and whither they go, are questions which every one who feels curious about such matters naturally ask. Allied to the caterpillar tribe, they are generated and go through the different transformations peculiar to that class of insects. It is supposed to be only under certain extraordinary conditions of the atmosphere that they are metamorphosed into the perfect animal, and afterwards poured forth in such countless myriads from the earth as to reach for miles in extent, and darken *the face of day from* their density.

They fly through the air with great velocity. Taking wing in the morning, they proceed in a body in one direction, and, as evening draws in, settle on whatever vegetation they can find. Even in the densest jungles, I am told, they leave not a leaf behind. The morning sun again animates them to flight, and the succeeding days are passed in a manner similar to the first. The country which is so unfortunate as to be the site of their last day's existence is doubly to be pitied, for should they unhappily settle on cultivated lands, not only is every blade of corn devoured, but the

air, by the poison exhaled from their putrefying bodies, corrupted to such a degree, as to breed a pestilence among the people.

I next come to an insect of a very different description, and one which, within the last ten years, has become extremely valuable. This is the lac insect. It is only in fixed localities and on certain trees that the accumulations of this singular little animal are found. The southern parts of Bundlekund have long been famous for their abundance, and, when at Hutta, I found that I was in the very heart of the lac country. During the months of February, March, and April, pickers go into the hills and jungles to gather lac, which they find in thick incrustations on the branches of shrubs and small trees. This, which is termed raw or stick-lac, is carefully collected and taken to their employers.

Since the discovery of a cheap solvent for lac the demand for the article has been immense, and the search for the raw material throughout the wilds of Central India proportionably great.

There are two distinct substances which go

under the denomination of lac, and probably two species of lac insect. One kind of lac affords a greater quantity of colouring matter than the other. As in the cochineal insect, so in the lac, the scarlet dye resides in the body of the little animal itself, the nidus consisting almost entirely of resin. Lac gathered from the Pilas-tree (*Butea frondosa*) is considered the best, as the insects who feed on these trees yield the greatest quantity of colouring matter.

Lac dye, although not so vivid, is found to be more durable than that derived from the American insect, and, being much cheaper, is consumed in great quantities by the dyers, in giving a scarlet colour to cloth.

At the commercial town of Mirzapore, on the Ganges, manufactories are established for the separation of lac dye from the gum resin, and for forming it into a fit state for the European market. The factory of Dr. Campbell, the Civil Surgeon of the station, is deemed the first in excellence; and in the London market the D.C. lac, both dye and resin, invariably fetch the best price.

The process of separation is quite a mechanical one. The incrustations, being carefully removed from the boughs of the trees, are thrown into a large pan, into which a few pints of water have been poured. Men then get into the pan barefooted, and commence bruising the mass with their feet. The insects, as they lie in the nidus, are by this means crushed and squeezed out, and become suspended in the water. When the operation is completed, the water is thrown on a fine strainer, through which it filters, leaving the scarlet dye behind on the cloth.

Many persons were ruined at the commencement of this trade, by embarking their capital in the form of advances to the natives, who, solemnly promising to fulfil their engagements, took the money ostensibly to pay the jungle walas for picking the insect, but who, upon receiving the stipulated sum, became careless concerning the result; troubling themselves little whether the people, whom they actually did employ, furnished the proper quantity. The system of advances cannot be too much deprecated. Whenever a [illegible] this folly, he may, with the [illegible] calculate on

losing half his capital at least. No people are so lavish with their promises, or so cheering in their accounts of the profits to be expected, in any speculation, as native brokers; but their florid descriptions invariably terminate in an attempt to get an advance of money, which is stated to be necessary to enter upon the undertaking.

It may be argued by those who are unacquainted with the exact state of the case, that when dealing with respectable men, should they fail in the performance of their contract, they may be compelled to refund the money by means of a process at law. Balances due from people in our own territories may be recovered in this manner; but prevention is better than cure, and in commercial transactions the risk of being pushed to the trouble and expense of litigation should be narrowed as much as possible. Unfortunately for the lac dye dealers, they have to negotiate with brokers residing in the neighbouring independent states of Rewah and Bundlekund, over which our courts exercise no jurisdiction, so that a British merchant cannot procure redress for his wrongs. To obtain a quantity of an article it is sometimes absolutely

necessary to make advances; when this is the case, the merchant must protect himself from imposition in the best manner that his judgment can suggest.

Having now given an outline, although a very imperfect one, of the people, their occupations and country, I pass on to consider in detail their climate and diseases. Medical topography embraces a wide range of inquiry, and requires on the part of the medical statist, an aptitude for observation which only few men possess, while a knowledge of this subject is of such paramount importance to the well-being of a state, that none can contemplate it without being impressed with its magnitude. Happiness is ever attendant on health. Without the one we can never hope to enjoy the other. So forcibly impressed was this truth on the minds of men in the earliest ages, that we find Homer paying to the medical profession the highest compliment it perhaps ever received,—

"A wise physician skilled in wounds to heal,
Is more than armies to the public weal."

Iliad, B. xi. 636.

Much of what fairly comes under the denomination of topography, has been already glanced at in the preceding pages, such as the natural character

of the country—its elevations and formations; the chief productions of the soil, as well as the constitutional and characteristic peculiarities of the people. It only remains, therefore, to speak of those natural phenomena which regulate in the opinion of philosophers the physical condition of man.

One fruitful source of disease in Central India is the variability of the climate. In no part of the empire of Hindústan is the sudden vicissitude of temperature so apparent as here. This remark applies particularly to the months of July, August, September, October, and November. During these periods of the year I have frequently known the dress of the European changed from cloth to linen clothing three times in the course of one day. From inattention to the impressions made by these atmospherical changes on the skin, many of the violent fevers with which strangers, both European and Asiatic, are afflicted, may be ascribed. The experience I have had of the climate of the Saugor and Nerbúddá territories convinces me, that, at least among the European community, much sickness might be avoided if more consideration was paid to this subject.

All over Upper Hindústan Anglo-Indians,

during the scorching months of April, May, and June, sleep at night outside their houses exposed to the broad canopy of heaven; and, at this period of the year the air is so dry that little or no inconvenience results from the custom. When a regiment is marched to the table-land of Central India, the officers appear to forget, in their desire to obtain refreshing sleep, that the continuance of this practice is unnecessary, and that they must incur danger by thus exposing themselves to the influences of a more changeable climate. The difference in the relative conditions of the atmosphere is not at first made apparent by any sensible effect, and, in consequence, they persist in a course of life fraught with the greatest hazard. The swampy, high, and woody nature of this region keeps the atmosphere at night constantly charged with moisture, and the chilliness which is produced on the European frame from this cause is frequently so great, that when a breeze succeeds the calm which prevails in the early part of the night, even in the midst of the hot season, towards morning, a blanket becomes necessary in addition to the sheet. Sleeping at night,

therefore, in any part of Central India, exposed to the open air cannot be too much condemned. I can speak from experience, having tried it once, an experiment which nearly cost me my life. It happened soon after my arrival at Keitah. The night was oppressively close. Not a breath of air was stirring, and so loaded was the atmosphere, that the body, while at rest, remained bathed in perspiration. To procure, if possible, a temporary relief, from the physical torture I was enduring, 'by steeping the senses in forgetfulness,' I had the charpoy placed in one of the door-ways which led into the garden. For a time I did nothing but watch the jackals, who, to the number of about a dozen, perambulated the verandah and compound, adding, by the discordance of their yells, much to the discomforts of my reverie. At length 'tired Nature's sweet restorer' closed my lids,—the screechings and wailings of the wild animals, the buzzing of the night flies, with the bawling vociferations of the chokeedars and sentries, became alike unheeded, and were soon altogether forgotten. How long I had been asleep I know not, but, in the course of the night, I awoke and found myself

bathed in rain, and the whole system so upset, that had I at the moment been offered all the money in the universe to keep my teeth from chattering, I could not have effected it. This was quite sufficient to convince me of what I might expect. At the time a cup of boiling hot tea or brandy and water would have been invaluable.

Before either, however, could be made ready, reaction had taken place; the shivering went off, and in its place came a burning fever. The violence of its accession was such, that by six o'clock in the morning the senses could scarcely be kept collected. The fever took fourteen days to subdue, and taught me a lesson never again to sleep in door-ways at night. The fact was, that shortly after I had fallen asleep a heavy shower of rain fell, and with it produced a current of air, which beat in upon the bed. The wind and rain coming on at a time when the pores of the skin were all relaxed, the perspiration became immediately checked, and that disorder in the system wrought which I have just described. This case is by no means a solitary one—an instance occurred not long afterwards at Cawnpore. I befel another medical

officer, who would in all probability have lost his life had I not fortunately been on the spot at the moment. Sickness was very prevalent at the station, and among those disabled from duty were both the Medical Officers of the 44th Foot. Being the only disposable surgeon at the station, I was desired by the Commandant to take charge of this regiment, which then mustered upwards of 1000 Europeans, besides women and children.

To be as near the sick as possible (for the wards were very full of men), I took up my residence at the regimental hospital, where the assistant-surgeon of the corps usually lived. This happened at the end of the month of June, when every one was hourly and anxiously looking out for a fall of rain. My companion, although very unwell, in spite of my remonstrances, would persist in sleeping outside the house at night. Within doors, in the daytime, I well recollect that the weather was most oppressively hot, notwithstanding that the westerly winds blew from morning till evening against the streaming tattees erected in the passages to cool the interior of the dwelling. At night, as usual, it fell calm, and the bed of Dr. —— was carried by

the servants into the middle of the compound for their master to sleep on. Keitah had taught me to prefer being devoured by *bull* mosquitoes rather than to risk my life by again sleeping outside.

About midnight I was awakened in a great hurry by Dr. ———'s head servant, who declared that his master was insensible and dying. I ran out as quickly as possible and discovered that the man's account was but too true. On lifting the mosquito curtains I found my companion cold and insensible, the pulse, at best, a mere flutter and sometimes intermitting; this, with an occasional moan, was all that remained indicative of life. As speedily as possible the bed and its occupant were conveyed within doors. The clothes, wet from a heavy fall of rain which had taken place, were exchanged for dry blankets as hot as they could be made, while the hospital serjeants and apprentices, without loss of time, were set to work to rub every part of the body. At intervals of two or three seconds, I administered pure hot brandy. Deglutition was all but suspended, and it was with difficulty that any of the spirit could be got into the stomach. The greater part, as it was poured

into the mouth, again escaped over the side of the lips, and was wasted on the pillow. At first, only three or at most four respirations were performed in the course of a minute, but in about a quarter of an hour, from the time of commencing the treatment just described, they grew more frequent, and in half an hour the pulse had become regular.

The sensations too were so far restored, that on making pressure over the stomach with the hand, I found the patient shrink, as if it occasioned great pain. This determined me to have recourse to the lancet, which was attended with the happiest results. The pulse rose under the bleeding,—at its conclusion, pressure could be borne with greater force, and the respiration became regular. On recovering his speech he fell into an incoherent strain, the delirium continuing for many hours. However, from this time, the application of boiling-hot fomentations to the stomach, with turpentine and other stimulating liniments to the feet and hands, had the effect of restoring him once more to life; but the constitution, already greatly shattered, was left in such a debilitated condition, that an immediate departure for Europe became necessary.

These two cases will serve to show the imminent risk which the Anglo-Indian runs in sleeping in door-ways or in the compound of his house at night, in the moist and chilly region of Central India, or in the dry and less hazardous climate of Upper Hindústan during the last nights of June.

The constitutions of many Anglo-Indians are so susceptible of external impressions, that their frames are little short of walking barometers. A man so unfortunately situated will declare by his sensations alone, on first awaking of a morning, from which quarter of the compass the wind blows. Of all the points whence it can possibly proceed, the east is the worst. An easterly wind in Hindústan affects every living thing, animated nature, of whatever denomination, evincing symptoms of its pestiferous influence. As long as the wind blows from the west, let the weather be ever so hot, no ailments arise; but should it accidentally shift into the opposite point and there continue, the animal spirits droop, the appetite palls, and the system throughout gets deranged.

The electro-magnetic influence of the atmos-

phere on the human frame is a subject worthy of attention; but although in the present day we can readily comprehend it from its effects, yet little or no progress has been made in presenting us with a *rationale* of its action. The nerves, in hot countries, are, I suspect, finer *lightning conductors* than many imagine. A singular phenomenon connected with this subject came under my own observation.

A gentleman while on his way to the Ganges to embark for Calcutta, after a long illness, dressing one morning as usual at daybreak, to set out in the palankeen for the day's march, happened to pull off quickly the flannel jacket in which he had been sleeping, and to his momentary astonishment perceived numerous electric sparks accompanied with sharp cracks such as are evolved from a charged electric machine. The nervous system, I should remark, in consequence of a long continued fever, had been for many weeks in a high state of morbid irritability — which circumstance helps to explain the extraordinary appearance here related.

The native population of Hindústan are fully

sensible of the effects of meteorological phenomena on themselves, and abhor an easterly wind quite as much as an Anglo-Indian can. On all external wounds, its baneful influence is fully as great as that of the pestiferous sirocco of the Mediterranean; and if for *Auster* we read *Poorub**, Homer's language in the 5th book of his Iliad would be strictly appropriate to this deadly blast:—

"Vapours blown by Poorub's sultry breath,
Pregnant with plagues and shedding seeds of death."

The doggerel too of—

"A wind from the East,
Hurting man and beast,"

proves, if I mistake not, that the poisonous influence of this wind is unfortunately but too well known in our own island.

From its elevation and immense tracts of forests and woodland, the air of the Saugor and Nerbudda territories is damp and chilly. The country being, in many parts, mountainous, has of course corresponding valleys, in which revel, in all the wild luxuriance of tropical vegetation,

* Hindústanee for the East point.

plants of every size and denomination. The country throughout is studded with tanks and other small pieces of stagnant water, and intersected with rivers. The former of these surround some of the towns. At Dhummow, for instance, which is a town containing 7005 inhabitants, I have counted no fewer than six large tanks overgrown with rank aquatic plants. The natives, insensible to the effluvia arising from stagnant water, never think of making drains for its egress. On the contrary, they preserve the water as long as possible for the irrigation of their lands, and seldom suffer from the effects arising from the perpetual decomposition which is going on.

In stagnant water, in India, vegetation is wonderfully rapid. The surface is covered generally with ephemeral plants, and particularly with those substances which give out a large proportion of oxygen, as if it were intended by nature to counteract the noxious effluvia arising from vegetation in a gradual state of decay.

The chief rivers of these territories are the Nerbádá, the Kein, Sonar, Bearmee, Beos, Deohar, Kopra, Omár, and the Shér. The first of these

is by far the largest; at Hoshingabad it is half a mile broad, and is esteemed so sacred in the eyes of all good Hindús, that to *see* Nerbádá Jee is sufficient for purification; whereas, to obtain a holy purgation from the sinful acts of the flesh, it is necessary that the body should *be laved* in the waters of Gunga Mye. The least of these streams in size is equal to the Tamar, before it joins the sea at Plymouth.

Like all mountain streams, these rivers are subject to sudden changes. For many weeks in the year there scarcely falls a drop of rain on the thirsty soil of Central India. The perennial streams shrink up to mere threads; the dry channels of the autumnal torrents remain deep and arid gashes in the sides of the hills; while the perpetual springs, trickling down the bottoms of the ravines, scarcely feed and keep alive the rivers of the valleys. At this season of the year the main branches, almost lost in their wide and naked beds, bubble their course in serpentine mazes through a waste of sand and pebbles; and become so shallow as to be forded with safety in almost every part. One autumnal tempest of rain, however, changes the

whole face of nature. At its onset the clouds break in deluges, the nullahs are suddenly filled with raging floods, the smaller springs swell into rivulets and thundering torrents that come roaring among the hills, washing away every obstacle that opposes itself to their career. The late murmuring brook spreads over its entire bed; and, soon overflowing its high and verdant banks, rushes over field and through village in a wide and foaming inundation.

The tempest past, the weather at once clears up; and, under the piercing rays of a vertical sun, and a soil saturated with moisture, spring up those myriads of ephemeral insects and vegetables whose sole purpose seems to be to show themselves and to die. The exhalations which this state of things occasions cannot but be hurtful to health; hence, at this period of the year, fevers, dysenteries, and cholera most generally occur, and the duties of the medical officer become those of incessant labour and fatigue.

Throughout Central India, bilious remittent fevers are the more dangerous; while intermittents, especially among the native community, are the more frequent.

When our European troops were first marched into the Nerbádá and Nagpore territories, through the Bundlekund States and the Deccan, on the breaking out of the Mahratta and Pindarree wars in 1817, our surgeons treated the fever which assailed so many of the men, as they had been accustomed to do the bilious remittents of the Bengal province.

The attack was ushered in with symptoms analogous to that peculiar disorder, and the lancet with calomel were for ever in requisition. But the patients died. So violent were the inflammatory indications at the onset of the fever, that copious and, frequently, repeated bleedings were absolutely necessary; yet when the febrile excitement was subdued, the patient, instead of remaining tranquil and composed, to allow of his system being brought gradually under the influence of mercury, which was the practice in Lower Hindústan, here lost at once his presence of mind; and, in the course of three or four days, from the commencement of the disorder, would fall from a state of high excitement into one of extreme exhaustion; after which came a muttering delirium, terminating in death.

This result was, unfortunately, so general that

the subject very soon became one of serious and most anxious consideration. Among the medical officers themselves a great diversity of opinion existed. Some attributed the mortality to the malignity of the fever rather than to any essential difference in its nature, while others as stoutly maintained that it was a disorder *sui generis*, and christened it, by way of distinction, the Nagpore fever. However disposed each party were to defend their respective notions on this point, the entire medical staff were tolerably unanimous in the belief that, to work a cure, a totally new plan of treatment must be resorted to.

The consequence was the resumption once more of the exploded doctrines of Brown. The violent inflammatory action which always characterized the attack was subdued, as before, by copious depletion and antiphlogistic diet. It was in the second stage of the fever that the innovation on the ordinarily received opinions of the schools was made. Instead of administering calomel merely, and trusting to the natural powers of the constitution, as heretofore, immediate recourse was had to diffusable stimulants, and the nervous depression

overcome by frequent and full draughts of bottled ale or negus*. The result amply justified the experiment.

The prostration in some cases has been so excessive, that to keep the heart in action, I have known as many as six bottles (a pint and a half each) of pale ale given to a patient in the course of twenty-four hours, and he has afterwards recovered. Without it he must have died. Again, when the pulse has become no longer perceptible at the wrist, and respiration scarcely discernible, bottled beer poured down the throat has restored the power of the circulation and saved the patient. By this plan of treatment the pulse acquires strength, the delirium subsides, and about the end of the fourth or fifth day the patient enjoys some natural sleep. Danger may then be said to be at an end, but only when the convalescence is watched with the utmost vigilance. The neglect of this important stage is sometimes fatal.

A lamentable instance occurred in my practice while residing in Central India. The patient was

* There is a pale thin ale brewed expressly for the Indian climate by some of the London houses. It is highly impregnated with the bitter principle of the hop plant, and is a very favourite beverage all over India.

a young man of extraordinary abilities, but unfortunately addicted to gambling. At the termination of the rains, which is the most deadly period of the whole year, after being excited for many days by play, I met him one morning taking his usual ride. He was clad merely in a white jacket, although the weather was misty and the air chilly. He said he did not feel well; that he had a headache, and a general sensation of uneasiness which he could not describe. These symptoms were ominous, and I begged, as earnestly as I could without exciting his alarm, that he would dismount and get into my vehicle, and permit me to drive him home. I was unsuccessful; he determined to continue on horseback, and, promising to look in on him after breakfast, we parted.

I felt so perfectly convinced in my own mind that fever was approaching, that I punctually performed my engagement. On entering the apartment, I found that matters had in no respect mended, but, on the contrary, were fast hastening to a crisis. The patient was lying on a couch. The breakfast had been placed on the table, but he had touched nothing. A few minutes after my arrival, the servants were called in and directed to take it away: from indif-

ference, the sight of the eatables had become offensive to him.

The headache was increased, and the indescribable sensations, which he alluded to in the morning, were now succeeded by a hot skin and quick pulse. No time was lost in reducing the arterial action, by copious bleeding and the administration of appropriate medicines. By the evening, the fever had again acquired so great a height as to call for the application of the lancet a second time. The boundings of the pulse, although reduced, could not be completely subdued, and the patient passed a restless night. The second day there was an improvement, but unfortunately two friends dropped in, who kept him in conversation longer than was prudent, and at night he became delirious.

I was with him till two in the morning, keeping the head bathed in cold wet cloths. Poor fellow, his delirium discovered what I had suspected, that his losses at play, although they were by no means heavy, had been a source of great anxiety and annoyance. He was constantly adverting to them; and then, breaking suddenly from the subject, he would fly to home. "I have lost—I know I have

lost," he would say; "but what of that—I can pay them all; it is only 1000 rupees, and they shall have it before I go." Then pausing a few moments, "See, see," he would exclaim, "there is England once again. Now I know I am safe. How beautiful she looks. The sea beating against her cliffs; while the breeze, tempered by her summer sun, blows us gallantly along." I assured him that he was right; that he was safe, and might soon see Old England; but that, unless he kept himself quiet, he should not go. The last words almost amounting to a threat, produced the effect I desired, and for a time he would remain perfectly silent.

The fever on the third day had gone into the secondary stage; the lips were for ever on the move, but hardly a word could be distinctly articulated; the skin being dry, and the pulse little better than a thread. Recourse was now had to stimulants—such as calves'-feet jelly and negus. The patient was allowed a spoonful as often as inclination led him to desire them. He grew better and better. The delirium subsided; and on the night of the tenth day he enjoyed a little sleep. The prostration of strength was excessive. The

strictest injunctions were therefore given, that on no consideration was he to be moved. Unfortunately in India very few of us are blessed with affectionate sisters or mothers to hang over the sick bed, anticipating our smallest wants, but have to endure the clumsy attentions of a man-nurse, who generally imagines he does his duty if he performs all that he is directed to do. To an untoward officiousness, however, in the present instance, may the death of the patient be attributed.

The fever having left him for two entire days, he was pronounced convalescent. At ten o'clock I quitted him for the night, doing as well as I could possibly expect. An European serjeant was left to sit up with him till day-break. About two in the morning a messenger arrived at my house with a hastily written note from the worthy individual who was residing in the same house with the patient, in these words :—"For God's sake come immediately; I fear poor —— is dead." I was thunderstruck. I hastened, as may be supposed, with all possible celerity to the house, in the hope that the alarm of the writer had been greater than the reality would justify. But, alas! it was too true; the patient whom I left doing so well at ten o'clock, was at two

a corpse. It was evident that no ordinary event could have occasioned this distressing termination; and the examination of the man who was appointed to watch the patient, soon disclosed the cause. "He fancied," he said, "that during the night the poor young man would like to have his shirt changed, so he lifted him up on the side of the bed, but, before he had been there a minute, he fell back faint on the pillow." From this state of exhaustion he never rallied, and was now a corpse.

The conduct of this man, after the repeated injunctions he had received, was more allied to idiotcy than to any rational impulse of the mind. To the stupidity—the reckless stupidity of this ignorant European, therefore, a valuable life was sacrificed. This case shows, then, the immense importance of carefully watching the early stages of convalescence from this debilitating fever; and therefore, requires that every attention should be given to it.

Patients labouring under this peculiar form of fever ought to be seen every two or three hours by their medical attendant, as it sometimes happens that in the course of the first forty-eight hours a

perfect remission of the fever occurs; and then, should quinine be energetically prescribed, the happiest effects will result from its use. The quantity I have usually employed has been from a grain and a half to three grains every hour; and, should three doses be administered before the fever returns, the frequency of the supply may be diminished, as the patient may anticipate no relapse. The case should be closely watched, therefore, lest such propitious moments be for ever lost.

As I am not writing exclusively for the profession, minuteness of detail is unnecessary. The outline here given is sufficient to show the deadly character of the bilious-remittent fevers of Central India, as well as the importance of attending to its secondary form and convalescence.

The next class of fevers to which the inhabitants of Central India are liable, is of the intermittent type; or "fever and ague," as it is more commonly styled by non-professional Anglo-Indians. On the subject of these disorders I shall not detain the reader long, as I have nothing of novelty to offer in excuse for so doing. These fevers assume every shape, from the quotidian to the double quartan.

The quotidian ague I have generally found the most intractable, and, in one instance, it seemed to resist the therapeutic influence of quinine. If the intermittent is of long continuance, it is apt to merge into a *continued* form of fever, after which the chances of recovery become materially lessened. As the use of quinine would then be no longer admissible, recourse must be had to less trustworthy remedies.

There is one circumstance attending the administration of the sulphate of quinine in fevers in India, that is not apparent in temperate climates; I allude to the peculiar effect, even in small doses, which it produces on the sensorium. One or two doses, of two or three grains of quinine in each, will sometimes induce all the symptoms of nervous apoplexy,—such as ringing in the ears; a sound as if heavy rain were falling; a tightness and fulness as if the head were bound with hoop-iron; an agitation and restlessness which incapacitate the sufferer from applying himself steadily to any pursuit: he being, as he describes it, "uncomfortable within himself." In ordinary cases, however, these effects do not arise; and there is

no impediment to the use of this highly valuable medicine,—a medicine which, without question, has, since its first introduction into India, been the means of keeping alive hundreds of our fellow-creatures.

In this part of Hindústan many of the natives treat their fevers by rigid abstinence. They call it by the term *Lhonghan*. When a man has determined on putting this system into practice, his recovery depends entirely on his constitutional stamina. The fever is literally starved out of his veins; for I have known a man go *fourteen days without tasting a particle of food*. If his physical powers are good, he rallies; but if he is not strong in constitution, which is most frequently the case, the *Lhonghan* system, like its prototype, homœopathy, proves to be but an unjustifiable trifling with life, and is sure to kill the patient.

The tenacity of life in some subjects is most wonderful. Long after every particle of muscular fibre has been absorbed, and the frame, from disease and starvation, attenuated to such a degree that the bones have literally come through the skin; nay, more, when worms in dozens have com-

menced devouring the body, the heart's action has continued, and life for days been sustained!

The disorder which comes next in the list of maladies is CHOLERA—the opprobrium of the medical art. As long as this disorder was limited to the continent of Asia, there was no end to the inuendos which were thrown out by the leading members of the profession at home, at the expense of their brethren in the East, touching their penetration and judgment in not mastering this complaint. They themselves, only desiring to witness this scourge of the country, that they might at once rescue the community from the imminent danger to which they were exposed, by the crude notions and jejune conduct exhibited, as they thought, by their less distinguished professional brethren who were attached to the public service in the East. Sooner, however, than they expected, their wish was realized; and then, to their consternation, they found, that the utter insufficiency of all known remedies, which formed the burthen of every report from the East, was not without foundation. And certainly, if the physicians in Asia were weak enough to retaliate with a *tu*

quoque argument, they would now have an ample opportunity. Never, perhaps, has there been such a discreditable exhibition since physic was erected into a profession.

Epidemic cholera having so recently ravaged every part of the continent of Europe, a minute history of it must be superfluous. In India, when an European is seized with the distemper, the usual practice is to get blood from the arm, if possible. Should the stage of collapse have set in before medical aid has arrived, and the blood have become stagnant in the veins, hot turpentine, or sometimes dry flannels, are rubbed over every part of the body; and blankets, as hot as they can be made, kept constantly over the sufferer, while opiates and hot-spiced brandy are liberally administered internally.

At the European Military Hospital, at Dinapore, solutions of carbonate of soda have been injected into the veins of cholera patients, but without any permanently good effect. The revival, however, which it at first produces, is very remarkable. The patient, in a few moments after the introduction of this salt into the blood, looks up

like a new man: so great is the change, that he appears comparatively well. But this alteration is not lasting. In the course of two hours he again flags; and notwithstanding the injection is repeated over and over with a corresponding temporary success, the patient, each time, suddenly reviving, is yet all the while gradually growing weaker and weaker, and eventually expires.

Cholera is of frequent occurrence in Central India; Bundlekund being the province in which its ravages were first so severely felt by the Indian government. The grand army of 1817, on its way to the Mahratta country, under the personal command of the Marquis of Hastings, was nearly paralyzed in its movements, from the dreadful havoc which this scourge committed amongst the troops. In cholera cases in India cantharides plaster fails to produce vesications on the skin.

Among the native community the lancet is seldom used, principally on account of the great personal objection which they have to its employment. The disorder is by no means so intractable in a Hindú or Mahomedan, as it is in an European; and, if the two first, in whatever

stage the case may be, apply to an English surgeon, his remedies will be likely to cure them. The epidemic, however, when once it breaks out, generally carries off great numbers of the people. It is regarded by them as a visitation from above, and only to be removed by the same Almighty Power that has seen fit to afflict them with it. The Hindús are taught by their priesthood to put implicit dependence on poojahs and other sacrificial offerings at the altars of their deities, rather than to seek for relief from the physical remedies which Divine Providence has placed within their reach; and thus the poor creatures die, family after family.

With regard to its essential character, I believe I can safely state, that amid the whole medical service of our Eastern empire, consisting of about 800 members, I do not think twenty will be found to advocate the doctrine of the contagious nature of cholera. It breaks out and disappears like an influenza; and no one ever thinks of shutting himself up, or exacting a quarantine, because the cholera is raging.

Autopsy in India, as in Europe, has thrown

no light on the pathology of cholera. Out of numberless cases that it has fallen to my lot to examine, with the exception of a slight morbid blush on the peritoneum covering the upper surface of the stomach, I know of no appearance indicative of a deviation from the natural state.

The Dracunculus or Guinea-worm is very common among the people in the marshy villages of Central India. Under certain circumstances it is a disease of excruciating suffering.

The villager is first made aware of his affliction by the swelling of his limb and an inability to use it, except with great pain. Poultices made from the leaves of the neem-tree (Azadirachta Indica) are immediately applied to the swollen part. After the lapse of many days a small pustule becomes apparent, which, on being pricked with a pin, shows the extremity of a minute white thread, very much resembling a shred of decayed ligamentous matter. This is the extremity of the worm. As soon as it appears, the usual practice is, to take hold of it gently and make two or three turns over a small bit of rolled paper. The pipe

or buttee, as the villagers call it, of paper, being retained at the mouth of the orifice, and the neem poultice again applied.

The next day an additional turn or two is made over the tube of paper, and so on, day by day, a portion of the worm is secured till the whole is wound off. Should the animal be unfortunately broken in the process of winding, the residue recedes within the flesh, and the poor sufferer is doomed to pass an indefinite period till it suits the pleasure of the troublesome creeper to again come forth. Sometimes these worms are two feet in length.

The plan which I have generally found most expeditious in disentangling them from their strong hold, is, first, to secure the extremity in the manner just described, and then to direct a full stream of water to be played on the diseased limb. The application of the cold to the part appears to paralyze the contractile power of the worm, for in a few minutes it yields freely to gentle extension. In this manner I have frequently got out as much as a foot of the interloper in one morning.

The received opinion is, that the dracunculi are generated in the body from the use of bad water, and my own observations go to confirm this view of the subject. It is not only unwholesome water but the use of impure food generally, that leads, in my opinion, to the evolution of these creatures in the cellular texture of the system. For I never recollect meeting with the disease except among the lowest classes in the abodes of wretchedness and want. Village chumars and other outcasts of the Hindú community subsist exclusively on domestic pigs (the most abominably filthy feeding animal that exists in Hindústan, and consequently never touched by any but pariahs), and when these are not procurable, on any dead animal substance they can find, such as horses, camels, or elephants. In addition to this, they drink the water of stagnant pools, and, therefore, it is very possible that with diet such as this, their flaccid and attenuated frames should predispose them to the generation of these worms, the rudiments of which have been taken in the food.

Captain Burnes, in his Travels into Bokara, mentions that "the water at this place is bad,

and said to be the cause of the guinea-worm, a disease frightfully prevalent in Bokara, which the natives will tell you originates from the water; and they add that these worms are the same that infested the body of the Prophet Job."

Concerning the remaining diseases of Central India, such as rheumatism, dysenteries, cataracts (which are very prevalent), and other ophthalmic complaints, calculi, &c., I have nothing new to offer. These diseases are for the most part closely allied to those of a similar character in other provinces of Hindústan, and do not therefore claim particular notice.

CHAPTER VII.

Indian sports—Hog hunting—Tigers' love for human flesh—Lions—Bears—Excursion in which a she-bear is shot in her den—The young—Fishing—Monkeys—Wild bees—Conclusion.

THOSE lovers of field sports who have never been in India, cannot duly estimate the exquisite gratification which that country affords. Throughout the vast provinces of the empire immense quantities of wild animals abound; and whether the desire be for pedestrian, equestrian, or elephantine exercise, the sportsman need never remain idle for want of occupation to suit his peculiar taste. At all times, and in every season, the thicket and the wild pasture-lands teem with animated nature. With no restrictions to cramp or destroy his roaming propensities, the most fastidious of Nimrods may dash after his quarry over mountain, or through dale, there being no one to molest or warn him from the land; while the fowler or the rifleman, never knowing what the

next moment may bring forth, is for ever kept in a state of ecstatic excitement, which completely tames his latent passion for home preserves, and renders green meadows and barley-crops for ever afterwards flat and distasteful.

To such a pitch of intensity are the feelings of a keen sportsman frequently wrought, that these exciting moments are afterwards treasured for the bare pleasure which their recollection affords; and throughout the chequered career of subsequent life, are again and again produced from the mysterious laboratory of the mind, in fresh and glowing periods. Who, after having endured personal encounters with the grizzly boar, daring conflicts with the savage tiger, or the noble lion, can submit to the daily routine of whistling on his dogs, and expending small shot upon birds? Hence every Anglo-Indian, on returning to the pastures of his father-land, soon grows careless and indifferent about field-fowling-sports. The impressions of his earlier days are for ever starting forward in his mind's view; and his thoughts constantly revert to the spirit-stirring times, when, beating through the wide wastes of thick grass and stunted brushwood,

his ears were continually assailed with the delightful words, "Soor! Sahib, soor!" or the not less cheering sound of "Hĕrun! hĕrun!"—"A boar, Sir, a boar!" or "a stag, Master, a stag!"

As I have before stated, the variety of game in our Indian possessions is immense; but of all the different kinds of sporting which the destructive disposition of man has yet discovered, hog-hunting is indubitably the best. By many the precedence is given to tiger-shooting; but those only who have engaged in both can fairly determine the point; and every pig-sticker to a man will declare, that no field-sport can be found so exhilarating as a chase after a wild hog. Unfortunately for the lovers of this sport, it is only in certain provinces that the country is sufficiently open to enable 'the riders for the spear' to get after their formidable game; whilst to shoot them, unless in self-defence, or in a dense jungle, is barely tolerated. The early dawn is the time usually selected by Anglo-Indians for this wild diversion.

"Bearer!"

"Sahib!"

"Top dughee ke wut hum ko jugaqoo: our

sono! syees se koho komeed arabee ghora tyeyar kurna."

"Buhoot atcha, Sahib."

Such would be the nature of the dialogue between a forester, who purposed to emulate his brother Nimrods in the following morning's chase, and his personal attendant, ere dropping his lids for the night; which elegant Hindústanee is to the following purport:—

"Bearer!"

"Sir!"

"Wake me to-morrow morning at gun-fire. And, do ye hear! tell the groom to have the grey Arab horse ready."

"Very good, Sir."

In hog-hunting, it is the pace that kills; and unless the sportsman be mounted on a thoroughly efficient nag, one that is in every respect fully equal to his work, he had much better remain away; as an ardent spirit can ill brook disappointment, and what grief can be more poignant than that of seeing the whole field giving the go-by, and, in spite of every effort, each competitor first scoring the pork! He who aspires to winning the tusks,

must order the best horse in the stable to be brought out, and then he may safely venture to enter into competition with his companions for the laurels of the day.

Owing to the intricate nature of the ground in which boars are found, the surest-footed horses are needed; and, for this quality, no other variety of horse can be compared to the Arabian. When pacing slowly on a high road, the smoothness of a table will scarcely prevent an Arab from stumbling; but when excited, there is no horse that will pick his way over rough and bushy ground, so well as the breed of the desert. The line of country which the boar usually takes his customers over, is either one series of deep holes, made by the animals themselves in their search after food, or thickly-studded bushes, from two to three feet high, surrounded by small mounds of earth.

In Lower Hindústan, especially about Moorshedabad, which is the finest district in all India for hog-hunting, an old boar will sometimes lead his pursuers a dance across jheels, nullahs, ravines and swamps, at a racing pace the whole way. At other times he will take to the mulberry plantations, out

of which it is next to impossible to drive him. On all such trying occasions, to borrow the sporting phrase, the Arab "is your only." These animals are less fretful than the Indian horses, and consequently pick out their way better; their mettle, too, is more lasting, and their activity in extricating themselves when in difficulties, so great that we rarely find a good rider thrown.

There are few situations in which judgment in riding is more required than in wild hog-hunting. It is this circumstance which makes so many noble-minded youths handle the spear. We conquer difficulties by daring to attempt them; and of course, in proportion to the hazards encountered in the chase is the extent of the hunter's field of reputation measured. But if judgment in riding down the boar be essential, it is no less so in the proper use of the spear.

The weapon the Moorshedabad men most admire is a bamboo, from six feet to six feet six inches in length, with a well-tempered, small, sharp iron point loaded at the opposite extremity with two pounds of lead. In the chase, the spear, if possible, should never be parted with, but held steadily

in the right hand about a foot and a half from the leaden top. As the boar charges down, it glides, by the mere act of collision, smoothly into the interior of the bearded monster, and as quickly out again; as the horse dashes impetuously forward. Sometimes the spear is thrown, but this practice must ever be condemned. For besides being unsportsmanlike, as indicating a dread of coming to too close quarters, it is dangerous, not only to the rider himself, but to the rest of his companions.

The spear, should it miss the beast, is apt to turn, on coming in contact with the ground, and in a close chase, where the party are all together tearing on at the top of their speed, by sticking with its point upwards, may run into the chest of a horse, or seriously wound the nether limbs of the rider.

To lodge the first spear, or "score the pork," is the bone of contention with all hog-hunters: the tusks of the boar being the just reward for this triumphal feat. It may appear incredible that a large animal, like a wild hog should ever be missed when charging down on his pursuer, but

such is the fact; and it by no means follows that the first man up should gain the tusks. He undoubtedly shares the best chance, but still there is hope for the hindermost; as the boar, when hard pressed, will first charge on the hunter, and then in an instant joggle across the front of the horse. Unless the rider be therefore a skilful hand, and has his horse well under control, before he can get the head of his steed round, those in the rear will have fallen foul of the beast and won the tusks. Up to the moment, therefore, of "scoring the pork," the sportsman, in a well-contested field, is never certain of his prey, and consequently should on no consideration relax in his efforts from overweening confidence.

Wild hogs, when they are first disturbed, generally make off as fast as their legs can carry them, at a speed that keeps a horse in full gallop. When they get blown, which they are sure to be, after a time, the pursuer gains on them rapidly; and then the boar, finding all chance of escape at an end, takes courage in his desperation, and turns to charge on his assailants. These are the mo-

ments of a hog-hunter's hopes, and with a steady hand and low-poised spear he gallops forward, boldly to meet his reeking foe.

There are instances, however, on record of old jousters disdaining safety by flight, and from the first moment of being disturbed, nobly taking their stand and grinning defiance at a whole field of riders. Such a fellow is one which all true sportsmen glory in, for he is sure to die hard; and from having his powers unimpaired, will charge with such strength and rapidity, that, to plant the first spear in his body unscathed, must indeed be ascribed to luck of no common order. Both horse and man stand a great chance of being grievously wounded, with the consoling prospect of a three weeks' in-door residence before their eyes.

The diversion of tiger-shooting, though it may not be esteemed so exciting as hog-hunting, by the most zealous followers of the latter sport, yet is one fraught with danger; the charge from a wounded tiger being often exceedingly terrific, and attended with distressing and sometimes fatal consequences. If he can steal unawares upon his

prey, whether man or beast, he will make an attempt, but rarely will he be found openly assailing his foe.

An instance illustrative of this fact was told me by an esteemed friend, who resides in the Narbádá. While marching, one morning early, through a lonely part of the Bhopal State, he fancied that he heard some one coming up in the rear; turning himself round on the saddle, to see who it might be, judge his horror when he found that the sound which had attracted his attention proceeded from a tiger, then within a few yards of him. In an instant the rowels of the spurs were buried in the horse's flanks, and the animal urged to the top of his speed. The momentary expectation of feeling the tiger on the shoulders prevented him for the first few minutes from looking round. When he did venture to peep over the right shoulder, my friend found, to his joy, that his enemy had paused: the beast remained standing far on the road behind, still gazing towards the runaway horse and rider.

On marching through Bundlekund in the month of January 1834, I fell in with three tigers—two

of whom crept away as soon as they were perceived, while the third remained stationary.

From excessive debility I had been unable to ride on horseback subsequently to my departure from Saugor, but was carried each day's journey in a palankeen. The identical morning of meeting with the tigers, however, I felt better; and determined on exchanging the horizontal position of the palkee for the upright seat of the buggy. I was getting on very well, and had nearly completed the day's march, when, as we passed along the foot of a low range of granite hills within sight of the ancient city of Seerinuggur, one of the troopers who rode with me as an escort, cried out, "Shér! Shér! Shér! Sahib, Shér!" At first I thought that they were mistaken, especially as I threw my eyes about the immediate neighbourhood, and saw nothing. "A tiger," I replied, "what do you mean?" As I said this, one of the men rode up by the side of the vehicle and pointed, with his hand, to the hill.

Sure enough he was right. About half-way up, on a large bare block of granite, were to be seen, not one only, but three tigers, sunning themselves

in the morning rays. After looking at each other for a few seconds two of the animals, which were small and not more than a third grown, moved off round the edge of the rock and disappeared, leaving their mamma, as I supposed, to take care of herself. I pulled up the horse for a moment to have a more steady view. The troopers, however, soon persuaded me to drive on, especially as the creature was growling, and had flogged the rock two or three times with its tail. I did so, and we soon lost sight of each other. One of the horsemen galloped back to direct the servants, who were still in the rear with the sleeping tent and horses, to come by another road, as there was a possibility of their not escaping so easily.

At Seerinugger I inquired of the people if they were aware of the near contiguity of such formidable marauders; but no one seemed prepared for the intelligence. "No bullock or buffalo had been lately killed," they said, "and therefore it was fair to infer that these janwars had only recently taken possession of their present residence."

Tigers are said, when once to have tasted human

flesh, to prefer it afterwards to all other kinds; and one or two circumstances which have come to my knowledge, go to confirm this belief. Not very long ago a tiger destroyed three carriers of the government mail in succession! The mail for Calcutta leaves Jubbulpore every evening. About midnight, the man to whom it is intrusted has to pass through a wild jungly district, belonging to the Thakoor Bishun Singh. These carriers are usually called *dâk runners*; but the speed at which they travel may be estimated, when it is stated that a letter from Central India takes twelve days in reaching Calcutta!—a distance of about 500 miles. At the time, however, that I allude to, an attempt was made to facilitate the transmission of the cross country mails, as the post from Central India was termed, by means of horses, in the same manner as the letters are conveyed along the Benares and Cawnpore road. Relays of horses were placed at given distances, and the letter-bag handed from one dâk man to the other.

In the performance of this duty, the letter-carrier (then mounted on a horse) has to pass

about midnight through a wild uninhabited tract of country. Deaths from tigers are by no means unusual in this part of Hindústan; and when one morning accounts came in to the postmaster at Jubbulpore that the postman's body, in a dreadfully mutilated state, had been found near a rivulet in the part of the country I have just alluded to, the circumstance, although a distressing one, did not create that strong sensation among the community which a similar event in a less dangerous province might probably have occasioned. The letter-bag was found untouched, not far from the dead body of the man; and the bony beast, on which he had been riding, grazing close by.

The vacancy occasioned by the man's death was immediately filled up by one of the numerous hangers on to be found about every official residence in India. No one doubted that the first poor fellow had been killed by a tiger; and the usual government reward of ten rupees was offered by the political officer in charge of the Jubbulpore division, to whoever would bring in his head. The career of the second man was a very short one, for on the first night in which he attempted to

pass the road, he met with the same fate as his predecessor; his body also being found dreadfully mangled. The flesh from the whole of the inside of one thigh was torn completely off, and the throat horribly mutilated. The horse, as in the former instance, was grazing on the road side, with scarcely a scratch on any part of his body. The reward was now trebled, and a pressing message sent to the Thakoor to exert his influence among his subjects to get the animal destroyed. This was just such an affair as Bishun Singh really liked. A man,—devoted to sports of all kinds, he now not only had an opportunity of indulging his taste, but at the same time of pleasing the English Burra Sahib, whose favour he was always anxious to enjoy *.

A grand battue, or honkwaee, according to the Hindústanee phrase for this hunting assemblage,

* As a striking example of the Thakoor's sporting *shouk* he built a house within the cantonment of Jubbulpore, that he might be near the English officers to assist and accompany them in their field-sports. He reared two tiger cubs, which his people found in the jungle; and when I was at Jubbulpore, on a short visit in 1828, they were about a third grown, and trained in harness to draw a light car!

was ordered without delay; and a gathering to the amount of some hundreds of persons immediately took place. In the mean time a third man was with difficulty induced to undertake the conveyance of the mail bag. Horrible to relate, he too met with no better success; for, like his brethren, he was also killed, and found partly eaten by the roadside. After this third calamity became known, no one could be found to accept the post of dâk carrier; for till the tiger, or lion, or whatever beast it might be should be killed, the road could not be passed without incurring great danger. A second proclamation was issued from the office of the principal assistant, and the reward raised to 100 rupees (£10) for the animal's head.

In a *sic volo sic jubeo* state, the people are not long mustering; and on the second day in which his commands were issued, Bishun Singh had as many people about him as he wanted. The party, therefore, sallied forth, in number about 300. Michauns, or temporary platforms, raised upon bamboo stakes, were erected in different spots contiguous to the rivulet near which the unfortunate

men had been killed. The people formed into line with Bishun Singh as their leader. Some were mounted, but the greater number were on foot,—promoting their object, and encouraging themselves by constant shouting. The country was full of jungle; and for the two first days they were unsuccessful. Throughout the night a man with a loaded matchlock kept watch from off each michaun; but no glimpse of the object which they sought could be obtained.

Towards the close of the third day, however, the elephants were heard to pipe; and in a few minutes, one of the party who was intrusted with a Manton, of which, by the way, the Thakoor had several, espied the gentleman they were in search of, stealing away through the long grass.

Bang!—bang!—right and left—followed each other in quick succession; and with such precision were the deadly contents of the two barrels put in, that the monster bit the dust, being knocked sprawling on the ground. The shouting that now followed was deafening. It proved the largest tiger that had ever been seen. The head was

soon removed, and dispatched *express* into Jubbulpore by the Thakoor, and the reward immediately paid from the public treasury, and distributed by Bishun Singh among his people. The road after this was again deemed safe, and the dâk carriers passed and repassed without molestation.

Tigers are so abundant in some parts of Hindústan, that to shoot ten or a dozen in one campaign is not considered to be any extraordinary sporting feat. I recollect when at Cawnpore in 1830, a party of three Anglo-Indians, who, having procured three months' leave of absence from the commander-in-chief, determined upon making a regular crusade, and, going off into the Fyzabad jungles in the Oude territory, they brought home forty-nine skins, killed by the trio within that short period.

It is not often that lions are found in Central India. In 1834, however, a very large lioness was shot in the great forest of T'heindoo Khéiree in the Reylee division. I saw the animal's skin, but did not take a measure of it.

In the jungles of Central India large black bears

are found. They are extremely savage, and, like the other mighty denizens of the wilds, are exceedingly tenacious of life.

On the confines of a dense jungle, twenty miles to the south-west of Saugor, I was once so fortunate as to shoot an enormous she-bear in her den, while nursing three cubs. This piece of good luck was the more valued as the circumstance was most unexpected. A brother fisherman and myself were out enjoying our favourite sport of mahaseeah fishing. The rivers of Central India abound with fish, such as mahaseeah, roué, sowlee, calabanse, and, in a few streams, trout.

Our tents were pitched at Rangeer, an obscure village, held in rent-free tenure from the British government, for the purpose of keeping up a police guard of six men at a pass in the hills, amidst the jungle, three miles from the village.

By means of this guard, tigers and other wild animals are scared away, and the road kept open for travellers. Rangeer, which is a charming spot, can boast of as fine a piece of romantic scenery as is to be met with in any part of Central India.

Here the Duhar winds its devious course through a gorge in the sandstone hills, having rugged cliffs on either side 500 feet in perpendicular height. Everywhere angular projections alternate with slightly sloping recesses, into which the autumnal rains deposit an annual supply of soil to support a growth of rank shrubs and forest trees, which, by the stormy force of the tufans and other tropical gales, have in many places lost their equilibrium and slid far down into the depths below, while from the crests of the bare rock are to be seen clusters of honeycomb hanging pendant over the abyss, stocked with myriads of wild bees.

The distance between these frightful precipices does not exceed 200 yards, of which the water occupies a part only, the rest of the space being stocked with a perennial mass of vegetation in its rankest and most luxuriant form. I am told that to stand on the edge of this terrific gorge, after the first burst of an autumnal storm is over, and to look down on the foaming torrent below, presents one of the grandest sights that well can be conceived. It was in a cave at the foot of the cliffs in the midst of the deep jungle, in the bed of the

stream, that the she-bear had taken up her residence, and suspected by the village people to have deposited her young there.

By a winding and very intricate path we descended to the bed of the stream, and soon began to exercise our piscatory propensities on the noble but wary mahaseeah. Our sport was incomparably fine. No disciple of Walton had ever planted foot before on the margin of this sequestered river; the pools of which literally teemed with fish. Careless in their safety, the finny race sported with the bait in the most delightful feeling of conscious security. In size they were somewhat small. The largest we caught did not exceed eight pounds. At first I was unfortunate. The silk-worm gut snapped three successive times while playing with the fish. This accident is always a grievous one, for as sure as ever a fish breaks away, the escape is communicated to the rest of the finny race in the neighbourhood, and the sport, excepting for small fry, in that identical part, spoiled for the day. This was the more provoking, as my companion was safely landing his prizes as fast as he could kill them. However, without being dis-

heartened, I repaired the loss each time as speedily as possible, and before the day was over was rewarded by an ample supply.

The stream in the month of February is small, and this being the time of the year in which we arrived at Rangeer, our fishing was confined to its deep still waters. As we moved along from place to place I observed that the rocks were discoloured with smoke, which, on inquiry, I found to be produced from the fires kindled by the villagers to destroy the bees previous to robbing them of their honeycomb. As well as I recollect, the people told me that a small quantity of brimstone was always added to the wood before setting it on fire. The greatest precaution is necessary on these occasions, for the disturbed insects will attack and effectually sting to death any man or beast that happens to cross their path. Thousands are killed by the sulphur fumes and drop down out of the comb. We were particularly charged to be silent, and to prohibit our attendants, as long as we were under the pendant habitations of these little labourers, which we could just distinguish hovering about their cells, from shouting or making

any kind of noise, lest their irritability should be excited and our persons be made to suffer.

The narrow escape which some horses of mine once had, from the grooms not having taken the precaution of first looking into the tree before they kindled a fire under it, I have already mentioned in a former part of this work: so that having, I may say, bought experience, I did not require much pressing to instil into the minds of our followers the importance of the villagers' recommendation. Indeed, they were, I believe, quite as well aware of it as I was, for one or two of the attendants then with me were present when the uproar in camp took place, and witnessed the pitiable condition of the groom who dashed into the midst of the swarm to liberate the poor horses from their pickets.

Throughout the day we were highly entertained by gangs of merry roistering devils of grey monkeys; who were for ever on the move, curveting and frisking from shrub to rock; at times perching themselves close by our side, and looking on as if they took a lively interest in our concerns. In the early part of the day, we were nearly a mile distant from the deep rocky fissure which the she-bear

had chosen for her den, but we had been gradually drawing towards it, and had at length got so near, that, before we could again find any good fishing ground, it was necessary to pass the domestic abode of this sable creature. Our situation for some time had been by no means a safe one, for the male bear was known to be in the neighbourhood, and, for aught we could tell, his wife might also be out taking the air. A consultation was therefore called. To get at the pool below without following the course of the stream, required that we should retrace our steps, ascend the cliffs by the winding and intricate course by which we had descended, and then walk at least a mile and a half. Our decision, therefore, was to brave the danger. I called for my double-barrelled Parker, and introduced into it a brace of balls. My companion also loaded his gun, and, from the villagers, we gathered a matchlock or two, and a few tulwars. The path being narrow, only one could pass at a time; while the grass and tall leafy bushes on either side, were so thick as to render them perfectly impervious to the effort of man. As my gun was considered the most dependable one be-

longing to the party, I took the lead, the rest, to the number of twelve or fifteen, filing close after me. I must confess that I felt somewhat nervous. Every moment became more and more critical, and not an eye was unemployed;—before—behind—to the right—to the left—every direction was scanned, to avoid, if possible, the catastrophe of a surprise. On—on—on—we went, till the load of suspense was removed, and all could breathe again. The danger had been passed; Lady Bruin did not make her appearance, and we reached the open ground in safety. Here the servants got literally laden with fish, and the day being now far advanced, my companion and self determined on winding up the sport by going in search of the bear.

For this purpose, the head man of the village and twelve of his people, armed with tulwars and matchlocks, conducted us by a stony foot-path, first along the course of the stream to a ford, and then by a winding track up the precipice, till we reached the top. We now found room to walk abreast, and moved on together until we stood over the opening into which the animal had been

seen to go. Following the steps of the village Jemadar, we now descended the precipice by a cleft which occurred in the rocks, occasionally swinging ourselves over the ledges by means of the roots or boughs of trees. When we had reached to within forty yards of the hole which was supposed to form the mouth of the den, we came to a tree growing out of a crack in the sandstone. From this, accompanied by one matchlock man, I lowered myself down about thirty feet more, the roots of shrubs and the projecting angles of stone affording the means, to another tree, from which I could command the mouth of the cave. Here we stopped and took up a position.

The men from above commenced operations, by rolling down large stones, and making a great shout, in order, if possible, to arouse the creature from her lair. They did not labour in vain. A few minutes after the matchlock man and myself had *planted* ourselves in the aforesaid tree, we espied something moving within the dark aperture, and in another moment I discerned the face of Bruin, apparently, inquiringly directed upwards, as if desirous of ascertaining the cause of

such unprecedented annoyance. The glimpse was but a momentary one, for in the next instant a ball shattered her occiput, and she bit the dust. Although the head was the only portion of the animal that had been seen, and our position, with reference to the opening of the den, an oblique one, my matchlock companion was so convinced that I had killed the beast, that he was for scrambling down at once to the mouth of the hole, and dragging her forth.

Before I permitted him to do so, however, I thought it as well to discharge the left-hand barrel into the aperture, although the moveable object had disappeared, and nothing having the semblance of life could be discerned. I feared that when he got down, he might find to his cost that she was only wounded, and, before bidding adieu to the flitting scenes of this transitory world, might give him a more hugging mark of her close attachment than he would altogether relish. Moreover, I strictly enjoined him to fire into the cave immediately he got opposite to it; while I kept an anxious watch from the tree, ready, in case of seizure, to send forth a second edition of leaden persuaders. No assault, however, was made.

The man found, as he predicted, that the bear had been killed on the first shot. He fired, notwithstanding, as I had directed him. The young ones, from the time of my discharging the first ball, began to cry piteously.

The village Jemadar and his men now descended the precipice to the mouth of the cave, for the purpose of getting the beast out; but, to the surprise of every one, it was found that the hole that admitted of a passage when alive, was too small to drag the body through when dead. The walls of the aperture being solid rock, we had no means of enlarging it; and, as night was now fast approaching, we were compelled to give up the attempt, and leave the carcase of the creature blocking up the hole.

The next morning at sunrise we were again at our work; and on taking a more accurate survey, we discovered the den to be formed by a deep broad fissure in the sandstone rock, extending up the precipice, and opening by a wide mouth, which was overgrown with weeds, within a few feet of the top. Down this shaft one of the men, by means of a rope, descended: for it was

found impossible to drag the bear out by the ordinary passage. As soon as he reached the bottom of this dark cave the young ones gave tongue, as before, setting up a most piercing cry of lamentation. There were three of them; two males and one female. Two were alive; one of the male cubs had been killed by a ball.

Having secured these noisy little creatures, we next proceeded to hoist the old mother out. The hind legs being well lashed with the rope by the man in the den, all hands clapt on above; and after a long pull drew her body up, and got it out through the aperture. The rope was once more lowered for the young ones and the man, who returned to us in safety. He told me when he came up, that there was no bedding of any kind in the den: the rough stones only having been apparently scraped away that the young ones might lie on the fine sand. According to the villagers' account the little innocents were a month old: they were very fat, and about the size of an ordinary cat. A supply of milk was procured for their morning's meal, which was discussed voraciously by them. They were then made over to one of the servants for transpor-

tation to Saugor: and my piscatory colleague being indifferent about them, I took charge of both. At a subsequent period I presented one to an esteemed friend; and up to the time of my leaving Central India, retained the other in my own establishment. As an excuse for not earlier dropping in on this troglodite family, I must urge the excellent diversion which the rod and line afforded us. An idea of the sport may be formed when the reader is told that those fishermen who have been so fortunate as to have had the enjoyment of catching salmon in the wilds of Connaught declare, that the mahaseeah, found in the rivers of Hindústan, afford sport equal to that which is obtained in the pursuit of the delectable fish of the rivers of Ireland.

The mahaseeah, or marsir, for it is spelt both ways, is the most powerful of the finny race taken in the Indian rivers. One weighing fifteen seers (thirty pounds) was killed by my Rangeer colleague in the Beos stream, near Saugor. His tackle was of the ordinary salmon kind, and the fish so large and strong, that it took upwards of half an hour to land it. The clear bright waters of the Nerbádá abound with fish. The mahaseeah

in particular, and at the wild and deserted city of Mundlah there is a rapid, which falls into the main stream, nearly opposite to the ruins of the fort, stocked with immense fish.

The first two dashes, after feeling the hook, made by the mahaseeah, are splendid. With a check on the reel, I have had five-and-twenty yards of line carried off without a stop! and the lengthened buzz imparted to the ear all the while that this little machine is in motion, forms a sound of the sweetest melody. On reaching the middle of the pool a jerking manœuvre will oftentimes be resorted to, for the purpose of breaking from the hook. These are moments of the utmost danger; and while they last, fairly bring the heart of the fisherman into his mouth. The greatest judgment is required in the management of the line at this time; for unless the gear be good, ten to one but the fish gets away. Finding himself foiled in these two attempts, the mahaseeah will dash away a second time, and then jerk again. By this time his strength gets apparently impaired, for he will permit himself to be wound in very close, and a novice would consider the sport over.

But an old fisherman knows to the contrary, and that a new and severe trial is certain to be made; for no sooner does the mahaseeah feel the shelvy side of the bank, than in the turn of a moment he again dashes out into the centre of the deep water, and struggles his best. This will be repeated over and over again. So that the greatest precaution is necessary; and without a clever assistant with a landing net, the moment of seizure is as critical as any.

The trout of the Indian streams have blue instead of crimson spots. The best rivers for them are the Parbutty in Meywar, and one or two of the Malwa rivulets.

There are an immense variety of field sports, besides those already enumerated, such as jackal hunting, with English thorough-bred fox hounds, coursing, deer stalking, hyæna shooting, hunting wolves, quail, partridge, jungle fowl, and hare shooting, all which I must pass over. The few particulars I have given will, I trust, be sufficient to substantiate the opinion expressed at the commencement of the chapter, that the sweets of Indian field sports, for ever after, render the

green pastures and barley-stubble of our father-land dull and distasteful.

I now conclude my imperfect delineation of some of the more striking features of the 'brightest jewel in England's crown,'—of a country whose natural resources are yet so unimpaired, that it may, with truth, be said to be only leaping at the present moment into useful existence;—of a country whose vast and fertile provinces impress the mind with a conviction of its being gifted with perpetual abundance, and of being possessed with the imperishable elements of national security. In short, an Empire which, whilst holding out commercial advantages of the first order, and encouragement of every kind to the man of enterprise, presents to the searching eye of the philosopher and the enthusiast, a grand and varied field of the most enlivening and beautiful description.

APPENDIX.

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No. 1.

BOTANICAL GARDEN NEAR CALCUTTA.

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NEAR Calcutta, on the banks of the river Hoogly, the beautiful Botanical Garden of the India Company is situated. Here is to be seen, vegetating in all the grandeur of tropical growth, the productions of every warm region; and nothing is more conspicuous than the varieties of stupendous creepers from the kingdom of Nepaul.

The garden has attained its present state of perfection under the able superintendence of Doctors Roxburgh and Wallich. It has fortunately always been a pet with the respective governments of India; and, in consequence, considerable outlays have, from time to time been made, to keep it in the most perfect order and efficiency. To enable travellers, and others, to avail themselves, as much as possible, of the benefits of this establishment, the superintendent has a supply of seeds and roots always ready for those who may apply for them.

Through this garden, the Otaheite and Bourbon sugar-canes have been introduced into Hindústan. Captain Sleeman on his return to India, in 1827, from the Mauritius, brought cuttings packed in sand; and, on reaching Calcutta, transferred them to Dr. Wallich for propagation. Two years' nursing sufficed to produce a sufficient quantity to enable a supply to be forwarded to the interior, to Captain Sleeman. This officer, at the time, was holding a high political situation on the Ner-

bádá, and in consequence of the interest taken by him in the propagation of this beautiful variety of cane, it has been there successfully cultivated.

ON THE PRODUCTIONS OF THE INDIAN SOIL. THE GOVERNMENT BOTANICAL GARDEN AT SAHARUNPÚR.

THE northern, like the southern parts of India, enjoys two crops during the year—one called *Khureef*, sown in May and June, and reaped in October, the other sown in October, and reaped in March and April, called the *Rubbee* crop.

The latter, embracing the months which approximate in temperature to that of the seasons in colder countries, correspond with them also in the nature of the grains cultivated; as, for instance, of *gramina*, wheat, barley, oats, and millet; of leguminous plants, peas, beans, vetch, tares, chick and pigeon peas; of *cruciferæ*—species of *sinapis* and allied genera cultivated for oil seeds; and of the *umbelliferæ*, the carrot, coriander, cummin, species of *Ptycholis* and *Fœniculum panmorium;* as well as of other tribes; tobacco, flax, safflower and succory. Hemp exists in abundance in a wild state, but is only used for making an intoxicating drug (Churus and bang). Almost all the esculent vegetables of European countries succeed remarkably well during the cold weather in India.

In the rainy season, a totally different set of plants engages the agriculturist's attention; as rice, cotton, indigo, maize; *Holcus sorghum*, species of *Panicum*, *Paspalum* and *Eluesine;* of leguminous plants, species of *Phaseolus* and *Dolichos;* many of the *Cucurbitaceæ*, as well as *Sesamum*, and the species of *Solanum*, for their esculent fruit. Ginger, turmeric, and *pan* or betel leaf, do not extend quite so far northward. The *Crotalaria juncea* and *Hibiscus cannabinus*, are everywhere cultivated for the purpose of yielding fibre for rope-making.

As with perennials of other kinds, so it is with those yielding fruit of an edible nature; many, both of tropi-

cal and temperate climates, succeed nearly equally in the northern parts of India. So that, taking the Saharunpore garden as an example, we have collected in one place, and naturalized in the open air, the various fruit-trees of very different countries, as of India and China, Caubul, Europe, and America.

Of those belonging to hot countries we have the plantain, custard apple (*Anona squamosa*), shaddock, orange, lemon, and guava, with the mango, tamarind and others, which are common in every part of India. Of Chinese fruits, the *lechee*, *loquat*, *longan*, *Wampee*, flat peach, and digitated citron are perfectly naturalized.

Of fruit trees from more northern countries, as Caubul and Cashmere, and from the hills of Europe; there are the almond, peach, pomegranate, nectarine, apricot, plum, grape, vine, apple, pear, quince, mulberry, fig and walnut. Of useful trees, of cold countries, which thrive in what is at some seasons so hot a climate, pines, oak, maple, dog-wood, service-tree, holly, juniper, and box. Of American trees, besides the *Lantana* and *Cacti*, the logwood, mahogany, *Parkinsonia acullata* and *Acer negunda*, may be instanced as perfectly naturalized.

That to hope for success in the cultivation of a still greater number of the useful plants of other countries, is not chimerical, is evident from the result which has already attended the attempts which have been made; particularly when we take into consideration that countries which have many valuable productions of their own, have already possessed themselves of those which were originally peculiar to India.

It is of some parts of China and Japan, as well as of America, New Holland, and the Cape, parts of Persia, Arabia, and the north of Africa, corresponding in latitude, and a good deal in climate, particularly in having hot summers and rather cold winters, that it would be the most desirable to acquire the productions, whether these be the gift of nature, or the result of the successful application of art.—*Royle.*

ON THE CAPABILITIES OF THE NARBÁDÁ SOIL FOR THE SUGAR-CANE CULTIVATION.

SUGAR-CANE is pretty extensively grown in Central India; but the species which appears to be indigenous to the country, is a miserable wiry kind, of a light straw colour. There is a second sort, much larger than the foregoing, the bark of which has a purple tint. I have no doubt of the soil of the Narbádá divisions being admirably adapted for the propagation of the sugar-cane. At present, the cultivation is carried on in the most careless and slovenly manner, and in very detached localities. Nothing, however, can afford a more convincing proof of the fitness of the soil for the culture of the cane, while it at the same time marks the devastation which these once fertile provinces have undergone, than the number of old stone sugar troughs which the traveller meets with in spots long since the undisputed possessions of wild and luxuriant nature.

Notwithstanding that Hindústan is the acknowledged parent of all sugar countries, we find her now immeasurably inferior to all her progeny in every thing that relates to the culture, quality, and manufacture of this article. In the West Indies the old Indian cane, which was the kind first introduced, has long since been discarded, and replaced by Otaheite cane. The result has amply justified the propriety of the change; whereas in Hindústan, till within the last few years, this variety of the plant was never seen.

The reader, I presume, need scarcely be informed that the canes furnished by the islands of Otaheite and Bourbon are admitted by all planters to be the best. Some of these canes, when ripe and trimmed in a fit state for the mill, have weighed as much as seven pounds, which is two pounds more than the largest picked canes of the old kind ever weighed. Moreover, they ripen sooner, and are ready for cutting in ten months. The juice obtained granulates quicker and throws up less scum in the boiling, than that which is procured from the older varieties of the plant. At Ota-

heite some of the joints have measured nine inches in length and six in circumference. Besides these qualities, the Otaheite cane possesses a property of incalculable advantage for the arid climate of Upper Hindústan, and that is, a power of resisting the injuries from excessive dry weather, longer than any of the other kinds of cane.

Next in value to the Otaheite and Bourbon cane, comes the China sugar-cane. This variety of the sugar plant was imported into Bengal in the year 1796, by the direction of Lord Cornwallis. Dr. Roxburgh tells us, in one of his communications, that this cane was propagated by him at the Botanical Garden near Calcutta, and subsequently distributed throughout the empire. Owing, however, to the extreme hardness of the bark, the mills of the country were unable to crush it effectually, and it never got into general cultivation. Dr. Roxburgh, however, considers that the cheap but powerful mill in use in the Ganjam district, an allusion to which has already been made, when noticing the capabilities of the soil along the line of the Delhi canals, to be fully equal to the purpose. According to the report of the Government commercial agent at Radnagore, and of the superintendent of the government sugar-farm, long since abolished, at Mirzapore Cutra, the China sugar-cane sent to them from the Botanical Garden by Dr. Roxburgh, *not only resisted the ravages of the wild ants and jackals*, two destructive enemies to cane plantations in Hindústan, *but yielded double the produce of the common Bengal cane.*

The propagation of this variety of cane, for the reason above assigned, was never followed up, and at this present time I am not aware of its being in existence in any part of India.

In the brief notice of the Botanical Garden near Calcutta, I alluded to the circumstance of Captain Sleeman having introduced the Bourbon cane into India, through the medium of this establishment. The field for his operations was the Nerbádá valley. The cultivation was commenced under his own immediate superintendence, and flourished so well that, in the year 1831, he suggested

to the Calcutta authorities, in his capacity of Principal Political Officer of the division, that, in order to insure the stability of this valuable culture, to the gradual but total extinction of the miserable thin variety at present grown, they should establish a nursery, or cane-farm, whence their native tenantry might be supplied with cuttings for seed, and by this means give encouragement to its introduction through the country, by lending their countenance to the undertaking.

This advice, it should be stated, was given by a gentleman thoroughly acquainted with the native character, and whose official capacity authorised him to offer it; —who knew the native mind to be so firmly enslaved to the prejudices of custom, that without the influence of a powerful example, it would be next to impossible to effect on it the smallest innovation; and, "that, in a case of this kind," to use the language of the Political Agent at Benares, the far-famed Jonathan Duncan, when addressing his government on this very subject, "the cultivator must literally be bribed to procure his own advantage." The Calcutta authorities, however, did not see the necessity to identify themselves with any such plan as that suggested by Captain Sleeman; and therefore proposed that the stock of Bourbon canes which he had accumulated, should be distributed among the farmers, at a charge sufficient only to save the government from any loss. This was accordingly done; but the simple circumstance of these beautiful canes requiring more space for cultivation than the planters have been accustomed to allow for the indigenous varieties, impresses these ignorant people with the belief, that the extra ground required equals, if not exceeds, the difference in the size and productiveness of the two sorts; so that, after all the expense and gratuitous trouble which has been incurred, first in obtaining and transporting the canes from the Mauritius—introducing and bringing them to perfection in the Narbádá valley, there is great doubt whether the culture will ever become general in this part of the country, unless it is undertaken and followed up by the enterprising exertions of European private individuals.

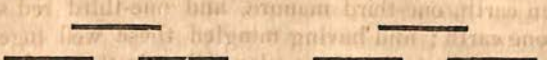
Captain Sleeman, to his praise be it recorded, has persisted in retaining a nursery of these canes, and within the past year has supplied many of the sugar districts with cuttings as seed. So highly are they prized by the enlightened sugar planters of Oude, that, setting aside the objections of their brethren in the Narbádá valley, they earnestly desire to obtain them; and there is every reason to hope that here, at least, the cultivation will become general. Eight years' trial has proved the fitness of the Narbádá soil for this new variety of cane, as the plants of last year, 1836, showed that they had in no respect deteriorated from their original standard.

The object being to increase the stock as much as possible, no large quantity of juice was ever submitted by Captain Sleeman to the boiler. Experiments, however, were made, and an experienced manufacturer procured from Lucknow, a distance of 350 miles, to superintend the process. The results were highly encouraging. Notwithstanding the disadvantage of manufacturing on a small scale, the grain was strong, and the price offered for the sample in the Mirzapore market the second in the list of the day.

Anxious to try the capabilities of the Saugor soil in the production of the Bourbon cane, I procured, in the year 1832, from the Jubbulpúr stock, which has been raised, as before stated, from cuttings procured from the Mauritius, as many canes as ten camels could conveniently carry. These I planted in a piece of ground newly broken up, but by no means the best to be found, for the soil was shallow and arid. The dry season proved a very long one, and therefore entailed a greater cost for irrigation than usual. However, the canes grew well, and when ripe fetched in the city bazar quadruple the price of the ordinary cane of the country: the one selling for 3 and 4 pice each, while the other only realized half a pice, or at most 1 pice. Besides the rattoon crop, I reserved canes sufficient to extend the cultivation to another acre, and when the season for cutting them came round, the applications I received from the retail dealers in sugar cane were numerous. This confirmed the correctness of the

report, that the cane of the previous year was highly approved of for its sweetness and juiciness. I parted with about a third of my stock, which I found sufficient to repay me for the outlay which had been incurred. The plantation was further extended, and in 1834 amounted to five acres. It was my intention, after this, to have entered on the manufacture of sugar, but, owing to a severe illness which came on, I was prevented from carrying my intentions into execution. Samples sent to the Mirzapore market from Jubbulpúr have realized the best prices.

The mode adopted in the planting of these canes was the same as that followed in the island of Mauritius. Grooves were formed four feet apart from each other, into which the cane cuttings were laid in threes; a space of three feet being allowed between every plot of cuttings. Each piece of cane had from three to four joints, and were laid in the ground as follows :—



Previous to planting, the precaution taken by the cane cultivators in Central India was carefully adopted. Each end was dipped into a composition formed of buttermilk, assafœtida, and mustard seed. This is done to prevent the white ants from getting into the substance of the cane and destroying it. Unless this precaution be taken, especially in new land, there is great danger of the entire plantation being destroyed before the seed germinates. The canes ripened in ten months. They were planted in February, and cut in December. By growing in *threes*, in the manner above described, the plants, as they get high, become a mutual support to each other in tempestuous weather, whereas, if single, the wind would inevitably blow them down.

The capability of the Saugor soil for the propagation of the Bourbon cane is, I think, sufficiently established; but were I to have an opportunity of again trying the experiment, instead of planting the canes exclusively in the black volcanic soil, I should be disposed to mix with it a third of red sandstone earth, which is everywhere

abundant. The black soil, especially the Kabur land when new, is very adhesive; and although, as in another paper will be shown, it is a powerful soil, yet from the inability of the roots to shoot through it easily, the canes are apt to be stunted in their growth. As an illustration in support of the propriety of this recommendation I can adduce a striking fact. At Jubbulpúr, which is about 136 miles distant from Saugor, pine-apple plants thrive in the greatest luxuriance; but they never could be made to grow at Saugor. All the plants which were sent over from the former place became, in a few months, sickly. As they had hitherto been planted in the ordinary garden soil, which is a rich black mould, it struck me that the introduction of a third part of silicious earth would have the effect of keeping the soil loose, and enable the plant to thrive, by allowing the roots to shoot more easily through it. I desired the gardener, therefore, to make a mixture of one-third garden earth, one-third manure, and one-third red sandstone earth; and having mingled these well together, to transplant the three plants then in the garden into this new soil. The benefit was immediate. The plants, which had only been *existing* during three preceding years, for vegetating is too strong an expression, soon began to recover from their sickly condition. The leaves, instead of being tipped with the marks of decay, became green throughout, and clearly indicated the restoration of the plant to vigorous vegetation. The plan was adopted about the same time by another gentleman at the station, whose garden lay contiguous to mine, and whose plants were in a more forward state, and the following season (1833) he had the gratification of cutting a large pine-apple of most exquisite flavour, which was the first that had ever been produced at Saugor.

No. 13.

ON THE IMPORTANCE OF PROMOTING COTTON, OPIUM, RHUBARB, AND OTHER VALUABLE CULTURES IN INDIA, BEING THE SUBSTANCE OF TWO ABLE PAPERS READ BY THE HONOURABLE HOLT MACKENZIE AND DR. ROYLE BEFORE THE ROYAL ASIATIC SOCIETY OF LONDON, MARCH, 1836.

Mr. Mackenzie paused to remark on the single article of cotton. It had become, he observed, almost a necessary of life to a large proportion of our manufacturers; and it was fearful to think how much we depended for it on a single source of supply. The thought had struck him forcibly when passing lately through the manufacturing districts of Yorkshire and Lancashire; and, observing the apparent prosperity which was everywhere displayed, he learnt, that the activity of the demand had reduced the stock in hand to what would suffice for the consumption of a few weeks only. He had that very morning been looking into a valuable work, "Baines's History of the Cotton Manufacture," some particulars in which it might be useful to notice. The facts stated relative to the soil and climate adapted for the different kinds of cotton, would be seen to afford a strong presumption, that India would not be found wanting in any essential requisite for the production of the best, provided our cultivators emulated the care of the Americans in the choice of soil, in the use of manure, in the selection and change of seed, in planting, weeding, thinning, and pruning, so as best to give health to the plant, and, at the same time, to prevent the waste of its vigour in the production of useless foliage; and if they did not spoil their harvest by carelessness in gathering, cleaning, and packing it.

The vast extent to which cotton has long been grown in India, and the exquisite beauty of some of its manufactures, are only additional reasons for pro-

secuting inquiry, it being still true that, in regard to the mass of the cotton produced, the processes of that country were, when compared with those of America, very rude and inefficient. The activity of the Americans in meeting the demands of commerce was no less worthy of praise and imitation. It was stated that in the year 1784, an American vessel arrived at Liverpool, having on board about eight bags of cotton. These were seized, in the belief that cotton was not a product of the United States. In 1832, the cotton wool exported from that country exceeded 322,000,000 lbs. of which more than 228,000,000 were brought to Great Britain. The total produce was stated to be about 400,000,000 lbs.

Cotton grown in the Tinnivelly district by the late Mr. Hughes has long and always brought the highest prices in the London market. A letter from a friend at Liverpool dated November 1834, states "that last week four bales of Bombay cotton were sold here at a higher price than the bulk of the American cotton. Of the total import of cotton into Great Britain this year (1834), expected to amount to 930,000 bales, about 700,000 are from America. The present market price for this, excepting some 20,000 or 30,000 bales of a very superior quality, called Sea Island, is 8½d. to 11½d. per lb., but the four bales from Bombay, grown in one of the Company's experimental gardens, sold last week at 11¾d. A very good judge of cotton here thought it not quite equal to Mr. Hughes's Tinnivelly cotton; but either is enough to confirm the fact that cotton can be grown in India fully equal, or rather superior, to the bulk of the American cotton; and from Mr. Hughes continuing to grow the finer kinds, the inference is, that it pays as well as (or probably better than) the common kind."

With respect to the quantities imported, the same gentleman continues, "Some here view almost with alarm, the present state and future prospects of cotton, and think the subject worth the attention of government. From the great increase of consumption, estimated at 6 or 7 per cent. more than last year, and

from the imports this year, being only about the same as last, our stock on 31st December next, for the *kingdom*, will probably be smaller than we have had for the last seventeen years. It is expected to be less than 150 bales, or equal to about eight weeks' consumption. On the 31st December 1825, we had enough for thirty-eight weeks' consumption; since then it has been gradually reduced; to sixteen weeks in 1831; fifteen in 1832; thirteen in 1833; and this year 1834, we expect to eight weeks."

At a late meeting of the Agricultural Society of Calcutta, the President stated "From the trials already made, and results obtained, there could be little doubt as to the success attending the introduction of a superior description of cotton." On the same occasion, Mr. Willis stated "that he had examined a few specimens of cotton at the request of Messrs. Gunter and Hooper, grown in some part of the Upper Provinces, and said to be the produce of Upland Georgia seed, of which the staple was excellent." Some parts of India resembling Egypt in many points of vegetation, we might with a little care grow cotton as fine as the Egyptian; and Mr. Johnson of the India House, states that Egyptian seed, sown in India, has given the best returns.

Malwa, Cutch, Guzerat, and the table land of Bundlekund are the sites apparently suited to the cultivation of cotton, not only because they are already great cotton countries, but, as it is said to prefer a volcanic soil, the decomposed trap-formation is the nearest approximation, and, in many parts, it is called "black cotton soil;" the supply of nutriment by the roots not appearing to be deficient, the elevation of the country warrants our inferring, that, other things being the same, the greater rarity of the atmosphere will favour exhalation, and, through checking the excessive growth of the parts of vegetation, assist the formation of cotton.

The primary necessity of attending to the nature of the soil is too generally acknowledged to detain us on the present occasion. Agriculture, though usually practised as an art, is a science so entirely dependent

on the laws of vegetable physiology, for the effects produced on the growth of plants, and the formation of their secretions by the several stimulants of light, heat, air, and moisture, as well as the nature of the nutriment afforded by the soil, that we cannot hope to succeed in improving old, or introducing new cultures, without understanding the subject as well in its general bearing as its special application.

The physical properties of plants, in connection with their structure and natural affinities, is a subject which has been so fully impressed by the celebrated De Candolle, as not to be omitted by any one desirous of applying the science of botany to practical purposes. Fixed to the soil, and subjected to the atmosphere, without the will to choose or the power to reject, we need not be surprised that, dependent as are the secretions of plants on the vital powers peculiar to each, that they should yet, in their proportions and quality, be much under the control of physical causes. Hence it necessarily follows, that the processes of agriculture and gardening in one soil and climate, may be those unsuited to another, though the country may upon the whole, be very favourable to the product required. Thus, if in a mild temperature, and not over productive soil, we require to stimulate a plant with richness of manure, this will probably be detrimental where high temperature is added to moisture of soil and climate; but, it may happen, that the same products will be obtained by diminishing the supply of nutriment by the roots, or favouring the escape of superabundant moisture in the leaves by a free exposure to light in a more dry and open atmosphere. But as the comparative moisture and dryness of the atmosphere are only to be ascertained by hygrometrical observations*; which have only been partially made in a few parts of the world, we need hardly be surprised that the subject has been neglected both by cultivators of the West in the accounts

* The meteorological tables published in the preceding Appendix will be found, I trust, to assist the practical agriculturist in this valuable department.

they have published or the planters of the East in the processes which they have followed. Accordingly we find that where nature happens not to have made the due allowance between the richness of the soil and that of the atmosphere for the plant experimented upon, men of mere routine, by simply adhering to the practices of other places have failed in a culture, when, if the play of vital functions, as controlled by different physical states, had been considered and accounted for, the result would probably have been very different. In India, failure seems generally to have been caused by an excess of nourishment in too rich a soil or too hot an atmosphere, or from a due want of correspondence between the richness or poverty of a soil, or the moisture and dryness of the atmosphere.

From the improvements which have already taken place in the manufacture of particular articles in India, there is reason to hope for the best results with respect to that of others. Indigo will strike every one as the most remarkable instance.

Opium, so long considered necessarily inferior if it was East Indian, has been of late years produced of a very superior quality, as is evident from the quantities of morphia yielded by different kinds as given by Dr. Smyttan: Bengal 3, Malwa 6, Turkey 6½, and some from Bareilly as high as 8½ per cent*.

* To this Dr. Royle adds the following note. "I have been informed by Dr. Spry, F.G.S. of the Bengal Medical Service, that the opium cultivation has been extended to the Cawnpore district; and the opium produced there has been reported by the person appointed to test the drug, as the best quality of all that is received at Benares. The cultivation was attempted a few years since and proved a failure; but owing to the exertions and good management of Mr. Reade, the deputy-collector, the Indian government is said to have derived a net profit in the first year, 1833, of 50,000 rupees (5000*l.*); the second year 75,000 rupees (7500*l.*); and last year the quantity was expected to be 200 máns; and it will go on gradually increasing." (*Private letter to Dr. Spry.*) Still further north, at Saharunpore, Dr. Royle himself made opium in 1829, which was submitted to the Honourable Holt Mackenzie, then Territorial Secretary to the Supreme Government of India, which the Medical Board pronounced "to be equal if not superior to the finest Turkey that comes into the market at home."

If we look to the commercial history of rhubarb we find that the best, though produced in Tartary and Tibet, traverses all Asia, to be sold in Europe under the names of Turkey and Russian, while the Siberian frontier town of Kiakhta is twice as far, even from the limits of the true rhubarb country, as are the British territories in Upper Assam; while there is very good rhubarb within the Himalya, and some of very excellent quality, near its frontiers. Is it not reasonable, therefore, to suppose that India may soon export some of the superior, instead only of the inferior, kinds of this drug?

The recent extension in the uses, and, consequently commerce of caoutchouc, induces a hope that advantage will now be taken of the suggestions of Dr. Roxburgh, in his account of the caoutchouc of *ficus elastica* and other plants, as has already been done with respect to that of *urceola elastica*, and that as shell-lac, caoutchouc, flax, and rape seed, have so recently become extensive articles of export, so it will be with other resins, more astringents, and not a few oil-seeds.

Rape seed, or at least an oil-seed so analogous as to pass for it in the London market, and belonging to the same tribe of *cruciferæ*, has been, of late, imported in such large quantities from India as to have yielded to one house alone a net profit of 40,000*l*.

Flax, or linseed, till lately unknown as an Indian export, but for which a higher price is now given than for that from Russia; of the Indian, Colonel Sykes reports, that ten bushels were imported in 1832; 2163 in 1833; 2826 in 1834; and nearly 10,000 tons in 1835.

Some kinds of Indian iron have long been famed, and specimens lately brought from the Peninsula were highly approved of by the manufacturers at Sheffield.

The discovery of the tea plant in Upper Assam, will be allowed to be a strong confirmation of the theoretical grounds on which its cultivation was recommended in different parts of the Himalya both by Dr. Wallich and Dr. Royle. This was done chiefly on the great coincidence in latitude, as well as in many points of climate, but

principally in the great resemblance in the vegetation of parts of the Himalya with that of the tea countries, as far as we are acquainted with these, and the finding in the former many plants which are not known to exist elsewhere, except in China and Japan.

It is the combination of favourable circumstances which render the present times so eligible for the proposed examinations, and for the improvement in India of old cultures, as well as for the introduction of new plants. How much a single specimen or the act of one individual may change the face of a country or influence the tastes or comforts of its inhabitants, we may see, in numerous cases; as, for instance, the eggs of the silk insect were brought in a cane by two monks from China to Europe; all the weeping willows, as, probably, all the Lombardy poplars, have originated from single stocks introduced from Persia; all the coffee of the West Indies is said to have been derived from a single plant from the hothouses of Amsterdam, presented to Louis XIV; while the rice of Carolina is said to be the produce of a small bag of paddy presented by Mr. C. Dubois, treasurer of the East India House, to an American trader.

India has in like manner benefited by the introduction of the potato, maize, tobacco, guava, pine and custard apples, &c. The difficulties hitherto attending such attempts do not seem to be owing so much to a lack of useful suggestions as a want of animation in those most interested in their adoption. But, as the dawn of a growing interest seems to be displacing the universal apathy respecting Indian affairs, it is probable that some attention may be excited, and enough be induced to combine in its support, some from philanthropic motives, others from a sense of duty, and many, no doubt will wish to see India benefited that themselves may be enriched.

No. 3.

DECEPTIVE NATURE OF THE BUNDLEKUND SOIL.—DESCRIPTION OF GAME-SHOOTING.

BUNDLEKUND abounds with game of all denominations; but one great drawback to sporting in this province is caused by the rotten nature of the soil. The moment the beaten path is quitted, the safety of the rider becomes endangered. In our gallops over the plains after the dogs, sometimes at a tearing pace, all of a sudden in go the horse's feet into the soil, as if it were a quagmire, and of necessity down comes the rider. Throughout the whole of the black volcanic soil of Central India this is the case; and it behoves the lovers of the chace to be continually on their guard, and be prepared at any moment for a tumble. This unsound condition of the soil is attributed to the quantity of titaniferous iron ore which it contains. During the rains the soil becomes saturated with water and swells; a dry shell is quickly formed at the surface, by the baking influence of the sun's rays, which leaves the subsoil to get rid of its superabundant moisture by degrees. As it does so, the earth beneath the crust shrinks into a compact mass, and oftentimes separates from the surface stratum, leaving a cavity of from three to four inches between the two. Whenever this happens, and a horse is galloped over the ground, the sudden pressure forces it in, and the serious catastrophe just mentioned, as occasioning such a drawback to the pleasures of the chase, takes place.

About Chatterpore and Keitah, the majestic but delicious bustard stalks its solitary course—the painted and grey partridge are without number, as well as quails, jungle fowls, peacocks, snipe, teal, wild ducks, green (Columba Javanica) and rock pigeons, and sometimes the leek or bastard florikan (otis Bengalense and auritus). Of the forest denizens there are wolves, neil-ghaus, balasingers, tigers, spotted deer, antelopes,

wild hogs, hares, jackals, and foxes; besides leopards, armadilloes*, pole-cats, &c. The deer are such wary animals that it is very difficult to get a shot at them. They herd generally in great numbers, and keep in the midst of open and extensive cultivation. At the approach of any object the buck pricks up his ears, reconnoitres for a moment or two, and then away he bounds,—his family of females following helter-skelter in the rear as fast as they can. Should any of the herd be surprised, and get cut off, as it were, from joining their companions, they will still persist in breaking through all opposition, however dangerous; and frequently when I have been riding along at a smart pace, the last two or three have crossed the path at only a few yards distance. Perhaps as good a way as any to get a shot at these animals is to mount on a pony that will stand fire, and then commence making a circuit of the plain, at a hand gallop, in which the deer are to be seen; taking care at each revolution gradually to contract the circle, and so narrow the distance. When within reach pull up and fire. Should the first shot prove successful, there is no fear of the second barrel not being brought to bear; for the consternation and surprise the herd are thrown into by the flounderings of their wounded companion, detain them on the ground sufficiently long to enable the sportsman to have a second shot with ease. Indian venison has nothing of the flavour which our park-fed English deer afford. This is attributable, perhaps, to our not being able to hang it sufficiently long. Moreover, the deer are killed without previous coursing, which accounts for the condition of the flesh being tougher than it would otherwise be.

* In the year 1819 the Boondela Chief of Chicaree presented to the Marquis of Hastings a complete suit of mail, made of armadillo skins.

No. 4.

ANTIQUITY OF CANNON IN THE EAST.

The discovery of ancient pieces of ordnance in various parts of India appears to confirm all that Sir Walter Raleigh advances with regard to these formidable missiles. "Philostratus, in the life of Apollonius Tyanæus, speaking of the expedition of Bacchus and Hercules in the East Indies, tells us, that those two great captains, whom Alexander did his utmost to rival, endeavoured to subject unto them the Oxydraceæ a people living between the Hyphasis (Indús) and Ganges; they were beaten back from the assault with *thunder and lightning*. This may well be understood by the great ordnance that those people had then in use; for it is now certainly known, that the great kings of the uttermost East have had the use of the cannon many hundred years since; and ever since their great civility and kindness, which was before Alexander's time. But Alexander pierced not so far into the East. It sufficed, that having already overwearied his army, he discovered the rest of India by fame."

In addition to this observation I may state, with Major Pogson, that there is every reason to believe that cannon was known in Asia centuries before it was invented in Europe; for, the rude construction of the ancient Hindú guns in Callinger and Ajeegurh, two hill-forts of Bundlekund, and Gualior, formed of bars compressed with iron hoops, and the large unwieldy mass of metal termed the Great Gun at Agra *, convey

* In 1832 this magnificent trophy of ancient workmanship was doomed to destruction. By order of the authorities in Calcutta the commissary at Agra was directed to saw it into pieces and sell it as old metal, for the benefit of the East India Company! It is necessary to be precise in the year in which this act of van-

an idea of the most remote antiquity, and afford a strong supposition that they were made in the zenith of the sovereignty of the Hindús. If we conceive them to be coeval with the empire of the Rajas of Kinnouj, which there is no reason to doubt, and reckoning from the time of P'hor, or Porus, the contemporary of Alexander, who, 331 years before Christ, conquered Darius king of Persia, and other nations of Asia, it must from such data, be 2168 years since these guns were made; consequently the period of their formation is lost in antiquity. Admitting the cannon used by Edward III. at the battle of Cressy, in A.D. 1346, and the gunpowder made by Swartz in A.D. 1340, to have been the first known in Europe, a part of the globe which at this remote period was immersed in darkness and semi-barbarity, it by no means follows that they were unknown to the enlightened nations of the East, who for ages bore the palm of civilization, and shone resplendent for the culture of the human mind. And if, as will doubtless on reflection be admitted, we have borrowed astronomy, arithmetic, architecture, and even letters from the East, why should we be disposed, in the blindness of our ignorance, to suppose that Asia was not also before us in the invention of gunpowder and artillery?

dalism, for it can be called nothing else, was perpetrated; otherwise the possibility of such an outrage might be called in question by future historians, as being incredible in such an age, and by men belonging to a nation styling itself, par excellence, the most enlightened and powerful of the world. We are accustomed to hold up to execration the act of the caliph Omar, in consigning the Alexandrian library to the flames, but we pardon him, because we know that he was impelled, by a mistaken but religious zeal, to promote the happiness of mankind; in the present instance no such excuse can be offered. The destruction of this valuable relic of antiquity was undertaken alone for the sake of filthy lucre. The Commissary could not execute his orders sufficiently cheaply to satisfy the Government, so it was stuffed with gunpowder and split into shatters.

No. 5.

ON THE VARIETY AND ANALYSIS OF THE SOIL OF CENTRAL INDIA. ALSO TREATMENT OF SOIL AND SYSTEM OF AGRICULTURE.

A CORRECT knowledge of the qualities of the soil of a country is of such importance both to landlord and tenant, that to remind either the one or the other of the fact, must be an act of supererogation. Without an accurate acquaintance with the relative natural powers of fields, how can the land revenue be fairly assessed, or the husbandman know what seed is best suited to his ground?

No man, however primitive or rude the nation may be to which he belongs, will be long, when his interests are concerned, in attaining a quantum of practical information from personal observation, which shall enable him generally to pursue his avocation advantageously, and thus it is with the farmers of Hindústan. They are, with respect to ordinary matters of life, in a state of profound ignorance, but in all that concerns their immediate occupation, they display a degree of practical tact which supplies the place of a better or more scientific education. Still this is not enough. However well pleased the cultivator may be with his present system of management, there can be no doubt that an acquaintance with the best improvements that have been made of late years in the art of agriculture, would be of infinite service to him.

And although at first he might be disposed to treat the information, in consequence of not completely comprehending it, with indifference, yet, by *judicious management* on the part of his superiors, he would in time be brought to estimate its value. To neglect the duty of imparting information on occasions where its utility is unquestionable, is an act of injustice to the cause of science, and discreditable to the character of those concerned.

Hitherto, as far as my observation has gone, although the government are the persons most interested, since they derive the chief portion of their revenue from the land, the Calcutta authorities have done nothing, either in the shape of money premiums among their farmers

and cultivators, or by any special mark of favour to their European servants, to encourage and promote so desirable an object, but remaining content with absorbing into their different provincial treasuries all the money they can find, leave the poor Assamee to scratch his field as he best can, and at last die in ignorance of that knowledge, which, if *liberally* imparted to him, would not only have improved his condition while alive, but have rewarded them for their trouble and outlay an hundred fold.

In the Saugor and Nerbudda divisions the soil is of different kinds, generally partaking of the character of the hills near which the ground may be situated. In the Saugor division it has usually a black appearance; in the neighbourhood of sandstone a reddish tinge. Reylee is very similar to Saugor in this respect. In the Huttah division the soil has a much lighter colour than in the two before-mentioned districts. The divisions of Hoshingabad, Jubbulpur, and Nursinhpur being all situated in the valley of the Narbádá have for the most part a rich alluvial soil.

The different kinds of soil are called *Kabur*, *Moand*, *Punrooa*, *Kheero*, *Doomuthea*, and *Bhutooa*. The best sort is Kabur, and it is of two kinds, one of a black colour, and the other brownish with a tinge of yellow. The first of these two varieties can be continued in cultivation for *thirty successive years without any fallow*, and the latter for a period of twenty-five years. At the expiration of this time a fallow of twelve years is required to restore these soils to their pristine strength and fertility.

Kabur lands produce wheat, grain, masoor, and ursee. When irrigation is employed it becomes what is termed garden land, and goes under the denomination of Kuchwaro, on which are grown vegetables of all kinds and sugar cane.

While residing at Saugor, it struck me that I might profitably dispose of my leisure time by making an analysis of these soils. I entered on the task under many difficulties, not the least considerable being the inability to obtain a ready supply of chemical re-agents. I am only able therefore to furnish four analyses. I

regret that it is not in my power to offer a greater number, but while engaged in the pursuit I was compelled from sickness to abandon it and quit the country. I do not pretend to perfect accuracy in those which I have attempted. Every one who has applied himself to chemical investigations must be aware that when the relative *quantities* of the different materials entering into the formation of a certain composition are required, the task becomes tedious and difficult, owing to the necessity of precipitating the ingredients separately and then washing and drying them. The quantities given must therefore only be considered as approximations to the truth. The course of analysis which I followed was the one recommended by Sir Humphry Davy in his work on agriculture.

I felt very curious to learn the composition of the Kabur soil, from the circumstance of its possessing the extraordinary power of producing wheat crops for thirty years successively without any manure and little ploughing. Of all grain, for a soil, wheat is the most exhausting; and in England farmers are of opinion, that with the best manuring, a field is unable to bear a wheat crop two years in succession.

Kabur soil, No. 1.—This soil, when first brought in from fallow, is in hard lumps, imparting a soapy impression to the touch, with an earthy smell when breathed on, and a slightly adhesive quality when applied to the tongue. Its specific gravity is 1.908. Colour dark brown.

200 parts	Water of absorption	21
	Carbonate of lime	15
	Loss by burning	3
	*Oxide of iron (peroxide strongly attracted by the magnet)	11
	Alumina	8
	Silicious sand	131
	Loss	11
		200

* Judging from the colour of the earth, I should consider the iron to be, in its natural state, a *protoxide*, and that the red heat to which the soil was exposed in driving off the vegetable matter converted it into a *peroxide*.

Kabur soil, No. 2.—In external appearance less hard than the former. Soapy to the touch. Specific gravity 2.080.

113 parts	Water of absorption	13
	Carbonate of lime	6
	Carbonate of magnesia	4
	Matter destructible by heat	7
	Oxide of iron	8
	Alumina	8
	Silicious sand	65
	Loss	2
		113

Moand is the soil next in quality to the Kabur. It has a smoky brown colour inclining to black. The poorer sorts have minute particles of kankar mixed up with them. This soil produces wheat, gram, masoor, and ursee. In hollows and the neighbourhood of water-courses, pease and seeana are grown. Moand land remains in cultivation for sixteen years, after which period it requires a fallow of almost equal duration to restore it to its original fertility.

Moand earth, No. 1.—Soapy impression to the touch. Very absorbent, and effervesces freely on the addition of muriatic acid. Specific gravity 2.550.

100 parts	Water of absorption	10
	Carbonate of lime	9
	Oxide of iron	10
	Alumina	6
	Silicious sand	62
	Loss	3
		100

This soil appears to contain little or no matter destructible by heat. After exposing it for some time to a strong fire, the only perceptible change was the conversion of the materials from an earth colour into a florid red, (the heat converting the iron into a peroxide). The weight was undiminished.

Moand earth, No. 2.—Colour blackish. No perceptible

smell or taste, less lumpy than the foregoing. Specific gravity 2.033.

100 parts	Water of absorption	11
	Carbonate of lime	5
	Oxide of iron	10
	Alumina	10
	Silicious sand	56
	Matter destructible by heat	3
	Loss	5
		100

It is proper to remark that the Moand earth operated on was taken from fields that had been some time in cultivation.

Punrooa is of no particular class of soil, deriving its name and distinction solely from its vicinity to streams and rivers, which, during the season of the rains, partially inundate it. The portions of Punrooa land which are overflown by the spreading out of the river water, are reserved for the production of those crops which ripen in spring (called rubbee harvest), while those parts which are protected from the floods are sown with grain that ripen in autumn (called khurreef harvest). The spring harvest is the more important of the two, as that is the time when the wheat, gram and barley are cut. On the subsidence of the waters a rich slimy deposit is left on the surface of the fields, which are immediately ploughed up and sown with corn. This takes place about the month of October, and in April the harvest commences.

This land never requires a fallow, the annual deposit on the inundated parts, with the great dampness preserved to the remainder, serve to keep the whole in a perpetual state of fertility.

Kheero earth has shades of yellow, lightish brown, and black. Lands on and about the sloping sites of villages and the vicinity of sandstone hills, go under the denomination of Kheero. Cotton is usually sown in this soil, but sometimes the farmers sow other autumn harvest (khurreef) grain in it, such as jooar, tillee,

(sesamum) and oord. It continues productive for twelve years, after which it requires to be laid fallow for a period of five years. There is another sort of land also called kheero, which is very productive and never requires a fallow. This is the manured land near villages, and the sites of old habitations. The soil is used principally for raising tobacco, but it is calculated for any description of crop.

Doomuthea is a soil, as its name implies, made up of two descriptions of earth. It partakes of a yellowish black colour, and is only used for raising the autumn harvest crops. These consist of cotton, jooar, tillee, koodoo and kootkee. It ceases to be productive at the end of the sixth year, and is so slow in recovering itself that a fallow of seven years is requisite to restore it to its original productiveness.

Bhutooa is of all lands the poorest. It is of a reddish colour, and has calcareous nodules (kankar) and other stones mixed up with it. It is very shallow in depth, and generally exhausted at the end of the third year. After which it requires a fallow of four years to restore it. In some places this soil cannot be cultivated at all, unless the rainy season has been abundant and favourable. Only the poorest sorts of corn can be raised on bhutooa land, koodoo and kootkee for instance.

The following table shows the relative productiveness of these lands under different stages of cultivation:—

Rubbee, or spring harvest crops.—Sown in November and reaped in April and May.

		When first brought in from fallow.	Second Sort.	When almost exhausted.
Kabur Land	Wheat	10 Fold	7 Fold	4 Fold.
,, ,,	Gram	12 Fold	7 Fold	4 Fold.
Moand Land	Wheat	7 Fold	5 Fold	3¼ Fold.
,, ,,	Gram	7 Fold	5 Fold	3¼ Fold.
Pantora, or Puntooa	Wheat	14 Fold		
,, ,,	Gram	14 Fold		
Doomuthea	Gram	4 Fold		

Khurreef, or Autumn Harvest Crops.—Sown in June and reaped in November.

		First Sort.	Middling.	Bad.
Panrora, or Punrooa	Cotton	9 Fold	6 Fold	3 Fold.
Kheero	Cotton	9 Fold	6 Fold	3 Fold.
Doomuthea	Tillee (Sesamum)	60 Fold	35 Fold	15 Fold.
Bhutooa	Kodoo	65 Fod	35 Fold	15 Fold.

The corn is sown by means of a drill—never, as in England, with the broad strike.

Occasional fallows for the restoration or amelioration of the land are inapplicable to the soil of Central India. By not bearing this sufficiently in mind when these territories first came into our possession, whole farms have gone out of cultivation which will never be reclaimed. The expense attending it would now far exceed any value the land might eventually possess, unless it should occur in a populous neighbourhood, or happen to be Kabur land. When a district is over-assessed, and the farmers in consequence, not only ruined, but cast into prison, as was unfortunately the case in the early part of our administration of these provinces, the families of such unfortunate cultivators usually emigrate from the country. By these acts of oppression a greater mischief resulted than the person who occasioned it could have contemplated. He forgot, in his anxiety to squeeze from the ruined Lumbardar the last rupee which he possessed in the world, the lamentable consequences which would inevitably ensue, from such unjustifiable severity—happy in his ignorance, he fancied that by throwing the farmer into gaol, and the land out of cultivation, the one, by some scheme of legerdemain would coin rupees out of the brick walls of his prison; while the other would gain strength by a year or two of

fallow. The first idea could as easily be realized as the second. The farmer, as a matter of course, grew poorer, while the lands which were to have been so much ameliorated by this temporary fallow, got choked with stunted brush-wood, and a grass which nothing but years could eradicate.

A lamentable instance of this folly, indeed worse than folly, in depopulating a country by oppression, is afforded at this present moment in the country to the south and east of Jubbulpore. I allude to the once beautiful districts of Sohagpúr and Mundlah. Before this part of Hindústan had been devastated by the Mahrattas, Mundlah was for a length of time the seat of government, and for a long period it was considered to be the richest province in the Nerbuddah. For miles, in one uninterrupted course, we are told, tracts of cultivation were to be annually seen waving to the breeze. Every night were to be heard the tinklings* of the numerous herds and flocks, as returning home from their mountain pastures, they wound their way along the woodland paths. At the court of Mundlah the feudal Thakoors did homage to their sovereign, and received in return grants and other immunities. Being one of the independent sovereignties of the Moghúl empire, Mundlah participated in the general fate which befel the Moslem rule in India in 1707. Notwithstanding that it lost its character for independence during the civil wars which now desolated the whole empire, yet as a rich and populous principality it continued to be distinguished throughout the land. A very worthy and esteemed friend, writing to me from this place, says, "The Nerbádá is here a fine deep clear river, and navigable for 9 or 10 miles, to a beautiful spot called Ramnuggar. Several fine old ghâts run down into it from the town, and lead up to a few good-looking buildings, the remnants of olden times. One of these has been appropriated as a Theseeldaree (revenue collectorate), and would make a very tolerable cold weather residence for the officer in charge of the division, should he choose to visit it. The fort and town are both upon

* It is the custom in India to suspend small bells from the necks of one or other of their bullocks, sheep, and goats.

a peninsula formed by the river. The fort is situated upon the extremity, and separated from the town by a fosse running entirely across. Landward the town is protected in the same way by a large ditch and a splendid rampart—the latter never entirely completed. Both are thus insulated, and it is really lamentable to see a place so finely situated, and once so flourishing, now entirely surrounded by terrific jungles and sunk into decay."

"Rocks, caves, lakes, fens, bogs, dens, and shades of death;
A universe of death * * * * *
* * * * * * * * * * *
Where all live dies, death lives, and nature breeds,
Perverse, all monstrous, all prodigious things,
Abominable, unutterable, and worse
Than fables yet have feign'd, or fear conceived,
Gorgons, and Hydras and Chimeras dire."—*Milton.*

"You may possibly consider that the account of this place forms a very uninteresting topic for a letter—but in my opinion it is by far the most remarkable object we have met with on our picturesque march, lying almost entirely through dense jungles, principally consisting of magnificent bamboos. Chupárá, in the Seonee division, is also a remarkable place, as being inhabited by a tribe of Patans, in the midst of a Hindú population, and has been even more completely laid waste, than Mundlah, by the influx of a horde of Pindarrees upon one luckless night. A most remarkable remnant of what it once was is to be seen in a beautiful grove of Cyprus trees—now looking as if it were a haunt for the ghosts of departed sages."

Several attempts have, within the last few years, been made to induce cultivators once more to settle in the Sohagpúr District; but although the land is known to be extremely rich, and the ground offered them for the trouble of clearing, yet they will not resort there. The few husbandmen who do go are soon attacked by disease and die.

These two examples are sufficient to show the importance of preventing desertion and of keeping the land in regular cultivation. It is not that the soil cannot be reclaimed when once overrun with jungle, but

the difficulty consists in the impossibility of getting respectable cultivators to occupy a district that, from oppression or any other grievous calamity, has become depopulated.

Manuring of land is by no means a common practice. Under favourable circumstances it is occasionally bestowed on cotton and rice fields. It may be thought by some that if the Kabur and Moand lands of Central India were regularly manured with stable soil they would never be exhausted. If put to the test, experience probably would justify this conclusion, but the principle, as far as it respects wheat and barley crops, appears inadmissible; and, if carried into execution, would be attended with most ruinous results. The analysis which I have given clearly show, that these lands contain little, if any, heating or vegetable materials, and yet the addition of manure to them would be fatal to the object which it was designed to promote.

To secure the perfect development of cerealious grains, in the hot regions of the globe, either the atmosphere must be tempered by the adventitious circumstance of elevation, or the soil, in my opinion, must be one which the farmers of England would call *cold*.

As the land becomes weak in its productive powers, a peculiar grass, called by the farmers "kaus," springs up, which in the course of the two following years grows so abundant as to prevent any corn that might be sown from arriving at perfection. The field is now abandoned, and runs a fallow of 12 or 15 years, with nothing on it but this rank grass and stunted prickly bushes. When the soil begins to recover itself, the bushes increase, the kaus diminishing in the same proportion: and when the latter has nearly disappeared, the ground is considered once more fit for the plough.

Further south, in the Bagalkol and Badamy Districts, appertaining to the Bombay Presidency, a creeping grass grows in fallow ground, which is called Hungalee or nut (*Agro[illegible]linearis*), and forms, with its roots one thickly interwoven mat for 8 or 10 inches below the surface. The stronger the Hungalee grass be, and the thicker the bushes, the richer the soil is

considered, so that great exertions are made by the farmers to reclaim these lands. The chief instrument in use by them is a heavy plough. Its share is so constructed that the instrument has a constant tendency to drive its point deeper into the soil, and to make its hinder part tilt up. To work this plough with effect a team of ten bullocks is necessary, of which two, if not four, must be of a breed more powerful than those produced in Bagulkol and Badamy. The quantity of land such a team of oxen is able to break up in a season is 24 statute acres. The labour commences in the morning after the labourers have had their breakfast, generally about eight o'clock, and continues uninterrupted until about sunset, when the animals are loosed from their yokes, permitted to graze for half an hour, and then driven home. This is repeated daily for seven months, in which time it is supposed that the 24 acres will have had three complete ploughings: one direct, one transverse, and one diagonal. When the ground is once broken up the roots of the nut-grass are cleared by the hand.

After this description of the method pursued, the reader need not be reminded, that to reclaim Kabur land in India is an Herculean task little short of that which is required for the preparation of lands in the back settlements of America. Kapoos, cotton, or Hurburree grain is sown during the first year: Kapoos is sown in September, while cotton, which is the more usual, in October. The crop of either is, however, always a poor one, and scarcely worth gathering. It appears to be useful in bringing the surface of the soil to that firmness and consistency which it is the great object of cultivators to maintain. An European farmer would be astonished at the lumpy appearance of a Kabur land field; but the Hindústanee farmer will tell him, that it is by these lumps that he not only estimates in part the value of the soil of his field, but that their presence is of the utmost importance in shading the delicate young blades of wheat from being suddenly scorched by the burning rays of the meridian sun.

By the end of the third year newly reclaimed land is

supposed to be in high tilth. The land after this preparation is never afterwards ploughed, unless the scratchings of the instrument which makes the drills for the seed be considered worthy of that name—the whole preliminary process to sowing the corn consisting in scalping the surface with a shallow plough.

The Kabur land in the Nerbudda territories is not so strong as the black soil of the Bagulkol and Badamy districts, nor does it require the application of such immense force to clear it. With some allowance in this particular, the course of proceeding is pretty nearly the same in both provinces.

No manure whatever is applied to these lands, nor during the many years which transpire from the time of bringing them into an arable state to the period of their exhaustion, do they ever require or receive any intermission of their annual labour and produce. When cotton is one of the subjects of culture, a little alteration of cropping is sometimes observed, as it is not deemed good husbandry to have this plant on the same ground two years successively. With regard to all the other articles raised on these lands, such as wheat, Hurbaree, gram, &c. they continue to be produced annually from the same fields.

The Bhilsah soil, so long celebrated for the excellent tobacoo which it produces, is a black Kabur soil, and the same as that just described. The Saugor or Nerbudda territories are a very fit locality for the extension of this plant as a commercial speculation.

A phenomenon of a singularly interesting character, in connexion with agriculture, is observable in Central India. It is a source of greater inquietude to the mind of the cultivators than all the other calamities of season to which they are exposed, and therefore one demanding especial notice. It is a disease which breaks out on the blades and stalks of the wheat and other culmiferous plants, by which the nutritient juices are diverted from their true course and the seed prevented from ripening into fulness. The term among the people for this blight is, Goonooah, or Gurooa. That it is contagious there can be no doubt, as it spreads, under certain

conditions of the atmosphere, with the utmost rapidity. An easterly wind is particularly conducive to this end, and on occasions such as these the poor farmers, utterly incompetent to stay its ravages, will declare "the atmosphere to be red with the poisonous element, dispersing it over every field." The appearance which the disease assumes on first attacking the plant is that of a red corrugated speck which, on close examination, appears to be a minute insect. The probability is, however, that the destructive element is the pollen of a parasitic plant, such as Sir Joseph Banks alludes to in a paper published by him, in, I think, the Edinburgh Review, on the causes of blight in corn-fields in England. This pollen, in moist atmospheres, and the nights on the table land of Central India, are always in this condition, gets absorbed into the healthy plants through the pores of the leaves and stalks, which are always open at such times; and there germinating, sprouts, and becomes nourished by the sap destined by nature for the perfection of the true seed. Sir Joseph Banks considers certain plants obnoxious to the generation of this parasitic fungus, and mentions particularly the barberry. Now in Central India the linseed plant (*ulsee*) is found to be the baneful emanator of this vegetable poison; but only when it has attained a certain degree of maturity.

The ulsee plant, or linseed (*Linum usitatissimum*), is never seen putting forth the fungus till it has had its seeds fully formed; then, if an easterly wind should blow, and a wheat crop be near, the mischievous element spreads like wild-fire; and at the moment when the expectant views of the anxious cultivator have all but realized to himself a pit * well stored with grain, comes this deadly blast, which dashes from its possessor that cup of plenty which his too sanguine imagination had already taught him to believe to be within his grasp.

* Throughout Hindústan the corn, as soon as it has felt the sickle, is, as of old, trodden out of the husk by the cattle and stored away in under-ground vaults.

No. 6.

GEOLOGICAL OBSERVATIONS ON THE SAUGOR COUNTRY.—FOSSILS.

THE tropic of Cancer intersects the Saugor and Nerbudda territories; the central degree of longitude may be fixed at 78° 30′ east of the meridian of Greenwich.

The whole of the divisions of these territories are mountainous in character—Saugor, Huttah, and Reylee, being on the table-land of Central India—which is crossed by ranges of trap-hills and red sandstone; while through Jubbulpore and the western divisions, granite and other primitive formations prevail. The elevation of the division of Saugor is 2000 feet above the level of the sea; the hills at the back of the Mint House at Saugor are 2090. The Saugor and Reylee country being essentially volcanic, we naturally expect to find all the products classed by geologists under this head. And such are everywhere found in abundance; pudding-stones, amygdaloids, zoolites, calcareous spars, coarse amethysts, jasper, and agates. Cart-loads of the two latter stones might be collected, which if in Europe, would amply repay the expense of polishing. Throughout Hutta there is an abundance of white and blue lias. At the village of Punchumnuggur I discovered some fit for coarse lithographic purposes; and if careful search were made in the line of the lias formation of this division, I feel assured that numerous specimens would be found, fitted in quality for the finest work; a discovery which, if made, would prove of incalculable utility, and be productive of great profit.

The sandstone and trap are oftentimes in such close apposition, as to form one and the same hill. A traveller, for instance, mounts up the face of a range of sandstone hills; as he reaches the top, he observes the colour of the formation to change from a faint red to one deeper and deeper; till at last it suddenly assumes a cindery appearance. In a few steps further he comes to scattered agates and jasper, and then fairly enters on

a field of basalt; whereas, on descending on the opposite side of the hill, he finds the latter material to constitute exclusively the composition of the uplifted mass. As well as the eye can discern, the elevation of those two materials are about the same. The sandstone, true to the grand characteristic of the great range to which it belongs (viz. the Vindya), presents a horizontal stratification. These double-faced hills are by no means uncommon—in many parts of the Reylee division the geologist may observe them—and in a cross-country cut I once made, from the town of Huttah to the village of Heerapore, a distance of about fifty miles, I fell in with something of a similar kind. The road lay across a range of hills which, from their conical appearance, struck me as being of trap formation; but the next morning, to my surprise, on coming to the foot of the ghât, I found the rock to be a friable sandstone. A short way up the hill it was more compact; and still further on hard, and pink-coloured. Although these hills were by no means high, they displayed a succession of flats or platforms, all of sandstone, with little or no dip in any part. Suddenly the attention was arrested by the presence of agates and jasper, and in an instant more a change into trap took place. Passing beyond this, and getting still higher, sandstone was again discernible, horizontally stratified as before, but in close contact with the basalt, and every here and there cropping out from amongst it. This was the condition at the top of the hills. Here we halted for the day, having found a small village called Sadpore, whence supplies were procurable. For the greater part of the next day's march, the road lay along a table-land without any visible descent; but towards the end of the journey the road wound down a series of ghâts, somewhat similar to those which had been ascended at Ramnugger, on the opposite face; and here again I observed the same indiscriminate blending of basalt with sandstone. Once I thought the sandstone fairly capped the trap.

The first discovery of fossils in the Saugor division, was made by Captain Sleeman about four years ago.

They consist of a series of beautifully silicified full-grown palms, in a state of high preservation.

They were found scarcely covered, lying in a calcareous bed (travertine and crystallized calcareous spar) at the foot of a range of trap hills contiguous to Saugor city.

Subsequently to this interesting discovery a bed of fossil shells, in a high state of preservation, within a very short distance of the present palm-tree site, has been brought to light. These fossils formed the subject of two notes, which I addressed to the physical class of the Asiatic Society of Bengal. After their perusal, the secretary did me the honour to publish them in his journal. As the last one is short, and may serve to give the reader a correct impression on the subject, I shall venture to transcribe it.

NOTE ON THE FOSSIL PALMS AND SHELLS LATELY DISCOVERED ON THE TABLE-LAND OF SAUGOR, IN CENTRAL INDIA.

(Read at the Meeting of the 26th December.)

"Some months since, when I forwarded a specimen of the silicified palm-trees (this referred to the trunk of an enormous tree which I forwarded to Calcutta for the Society's museum), I stated that the trap hills about Saugor, which are at an elevation of upwards of 2000 feet above the level of the sea, formed an amphitheatre; not, however, in one continuous circle, but with here and there a break. Within this circle of trap-hills, I ought to have stated that a second jutted out of compact red sandstone, but of a less elevated extent; the latter being portions of the Vindya range.

"I took occasion to advert to the former of these two formations, because it was at the foot of the portion that ranges along the Jubbulpore road the limestone bed (travertine and crystallized calcareous spar) projects, on which, mixed with the *trap debris*, the *silicified* fossil trees are found. I lay stress on the word silicified, for it seems singular that silex should be the fossilizing mineral of remains found on a bed of *crystallized* cal-

careous spar and travertine.* It would seem to indicate that the bed these remains now repose on could not have been the place of their growth, but that they must have been projected from a distance; and yet such distance could not have been great: for, notwithstanding the splintered condition of the trunks indicate that a powerful force must have been applied, yet the attachment of all the tender tendrils, so peculiar to the palm-tree species, still to the thicker parts of the roots, and which, though perfectly fossilized, may be easily broken off, clearly shows how inconsiderable the abrasive power must have been. That their present site is not their original one seems now to be further confirmed, by the discovery of a bed of fossil shells (univalves reversed) distant only about half a mile, and apparently in a continuation of the same limestone bed as that on which these palm-trees repose. In the one case, however, the calcareous formation forms the *surface* soil, whereas in the latter it is *covered by seventeen feet of hard and soft basalt*.

"The discovery of these shells was made, as discoveries of the kind usually are, by accident, at the foot of the trap-hills, beside which the road to Jubbulpore runs. The sites of each of these fossil remains are about a mile distant from the Sudder bazaar, belonging to the military cantonments of Saugor.

"A well had been sunk about fourteen years ago, and a small hut erected beside it, formed of the hard earth which had been dug out. In a whitish lump of this out-turned deposit a large shell attracted the attention of a geologist, the original situation of which being, according to the owner's account, in the middle of the well. To render the bowlee, or reservoir, a permanent structure, the sides of it had been walled up with immense blocks of sandstone, so, to get at an accurate knowledge of the depth of the calcareous stratum, it

* Mr. Prinsep considers the constant occurrence of flints in chalk sufficient to outweigh this objection. The cretaceous formation of Great Britain and France, in which flints abound, is, however, a very different formation to the calcareous strata abounding in the volcanic regions of Central India.

was necessary to sink a shaft close by its side. I got this done, and was amply rewarded, shells in great quantities being found. Specimens of the different strata have been preserved, and their respective depths noted. A sample of each, as well as specimens of the fossils, I have had the pleasure of forwarding for the museum of the Society. I am unable satisfactorily to determine whether the shells are marine or fluviatile. The opinion here is that they are marine: a striking peculiarity in them is that they are all reversed, and some are much more flattened than others.*

The surface soil (No. 1) as well as Nos. 2, 3, and 4, are well marked, and the transition from one to the other is as abrupt and sudden as the specimens furnished. No. 5 is not so well marked. I have called it wacke. It pervades, as a subsoil, a large portion of the trap-lands about Saugor.† A course analysis which I made of a sample, from a well about a mile distant from the place where the shells were found, gave me as follows:—Specific gravity 3.600

200 parts	Loss by drying	34
	Magnesia	18
	Alumina	14
	Peroxide of iron	30
	Silicious sand	109
	Loss	4
		200

When first dug out it is friable, and has a very gritty feel, falling abroad on being thrown into water like lime when it is slaking. In the sample I have sent, I observe several minute nodules of carbonate of lime, which will of course alter the results as given above. No. 7 is a coarse silicious grit, and No. 8 is again ba-

* An eminent London conchologist, to whom they have been shown, is disposed to regard them as an extinct variety of ampullaria, and consequently fluviatile.

† Saugor is distant six hundred miles from the nearest line of coast.

salt; beyond which I did not deem it necessary to search.

I do not venture to offer any hypothesis on the discovery of the above interesting remains, but content myself with bringing to the notice of the members of the Asiatic Society of Calcutta, the singular circumstance of shells and palms, in a high state of preservation, being found lodged amidst volcanic matter. I hope some day to be able to ascertain the limits of the fossil beds*. The following is a section of the shaft:—

	Feet
1. Surface soil, black	3
2. Soft basalt	2½
3. Hard basalt	7
4. Soft basalt	1½
5. Wacke, with nodules of lime . .	3
6. Travertine, with embedded shells in abundance	1½
7. Coarse silicious grit . . .	2
8. Hard basalt	

As yet these are the only two discoveries which have been made in the Saugor division; but so great has the fondness for geological study become in India, that we may look for daily accounts of the further discovery of new and interesting fossil remains, and in this highly important pursuit the Saugor geologists will not be backward.

Leaving this division, then, and striking into Jubbulpore and Nursingpore, we find the vigilant eye of Captain Sleeman again the first to bring to light a series of extremely valuable animal fossil remains; and that, too, after a professed geologist had gone over the ground and pronounced all to be barren. Attention being once drawn to the subject, by the discovery which Captain Sleeman made, Mr. Spilsbury, surgeon to the Political Commission on the Nerbudda, has pursued the geological examination with all the enterprising zeal of an enthusiast, and the valuable additions lately made by him to the museum of the Asiatic Society in Calcutta, has led

* This hope I have never yet been able to realize.

to the subjoined notice from the pen of the Secretary himself. The language of so highly acknowledged an authority as Mr. James Prinsep, on the subject of these primogenial relics, will doubtless be far more acceptable than any substitute which I might offer.

" The last dispatch from our zealous and disinterested contributor, Dr. Spilsbury, puts it in our power to speak with some degree of precision of the nature of the fossil remains discovered by Captain Sleeman, and followed up by himself, in the neighbourhood of Jubbulpore; a field, it must be remembered, that had been passed over by Captain Franklin and other geologists, without any suspicion of the existence of such treasures.

" The dispatch I allude to, consists of a series of specimens of the strata wherein the bones were found embedded, with references to a rough vertical section of the country. We observe that the low plains covered with jungle, at the foot of the hills in question, consist of sandstone lying upon granite, which protrudes in several places near the town of Jubbulpore. Above the sandstone, lies a conformable stratum of silicious limestone, which, on solutoin in acids, proves to be composed of grains of clear silex, united together by carbonate of lime, here and there tinged with chlorite, or holding nodules of that mineral embedded; at other places, passing into pure quartz, and jaspar conglomerate: no stratification is perceptible in the limestone, which seems rather to bear the character of a tufaceous deposit. At one place, an oval concretion is inclosed, which resembles a seed or almond; it is filled with green earth. Towards the southernmost hill, this rock contains bones embedded in its substance, and having that pink colour observed in the first specimen sent to the Society; they are accompanied with water-worn pebbles and chlorite.

" Half-way up the same rock, of which Dr. Spilsbury represents a clear section to be open to view, a platform exists, varying in breadth from five to twelve yards. This, Mr. B. will explain to indicate (as the rock above and below is of the same quality), the existence of an ancient coast, worn away by the gradual

action of water before the level of the latter was depressed: another partial ledge occurs on the surface of the silicious limestone, marking an anterior water line, when only the superincumbent beds were exposed to the corroding action of the sea or lake. It was upon this ledge, in the southernmost hill, that the first bones were discovered, embedded in a gravel or an alluvial conglomerate.

"The uppermost rock is a flœtz trap, or horizontal bed of compact volcanic basalt, which must have been spread over the whole surface, long before the denuding causes began to prevail, though posterior to the existence of the animals whose bones are embedded in the subjacent rock; unless, indeed, it should turn out that the breccia containing them occurs only in exterior patches, formed of their detritus, and containing also portions of the basalt, which one or two of the specimens, whose labels are lost, seem to render probable.

"Of the nature of the bones found embedded here, and of the period in the history of the globe to which they belong, the imperfect broken state of the fragments precludes us from pronouncing any opinion. Fortunately, however, Dr. Spilsbury's discoveries did not stop here; as he himself correctly observes in one of his letters—'One discovery has gradually led to another, and he has become a geologist, in spite of himself, by the force of accidental circumstances and the intense interest which such discoveries are calculated to awaken in the mind of man. A notice is inserted, as a hint, in the journal, that fossil bones may be met with near Jubbàlpur:—I am put on the *qui vive*—set out for the hills and bring in a collection of specimens:—my people perceive my curiosity and bring me in anything uncommon they meet with:—I go to Brimhan Ghat, whither the European residents have constantly resorted for years past, and the moment my elephant-driver sees a huge bone, he brings it to me, and it is discovered to be an elephant's jawbone in a perfect state of preservation.'

A Fakér, it seems, had occasion to pull down and rebuild his hut, near the banks of the Nerbudda, when in the foundation these curious relics were found and

thrown aside. "So again," says Dr. Spilsbury, "some four months ago a little boy tells me of a wonderful skeleton, said by the natives to be that of a giant, describing the fingers as being a foot in length; a head villager has a *knee-pan* that serves for a scale to weigh three or four seers of cotton in: 'Is not this,' says the boy, 'as wonderful as your jawbone?' to this I readily assent, determined at any rate to sift the rumour. It was stated to be in Mr. Garstin's division of Nursinhpur, in the Omar river, fifty-four miles from this place, and about nine miles from Garawara, the town at which the political officer resides. I applied to Mr. Garstin, who, owing to the rains, was only two or three days ago able to dispatch to me a specimen. I suspect it will turn out to be a fossil elephant, but I shall be better able to speak on the subject when I have visited the spot on my way to Nursinhpur a few days hence."

While committing the foregoing notice to paper, Mr. Prinsep received the following account from Dr. Spilsbury, confirming the expectation alluded to in the above private communication.

"The bank laid bare by the gradual action of the Omar river, exhibits an inclined plane marking the limit of the rise and fall of the stream about twelve feet. Above this the bank is exposed for twenty-five or thirty feet in height between two ravines, which with the surface are covered with thick jungle. The upper part of the bank is composed of a light soil, mixed with kankar, and a number of globular kankar nodules are found in the bed of the stream, containing silicious nuclii. The rock in which the bones are embedded is a gravelly concrete, formed of rounded pebbles, grains of quartz, jasper, and basalt united into a hard rock, with calcareous cement*.

"By the aid of the villagers," continues Dr. Spilsbury, "and digging all round, I was able to upset the

* This conglomerate is very extensive in the Saugor and Nerbudda territories. In the Re[illegible] along the banks of the Sonar river, immense q[illegible]nd; and there it has a great resemblance to the co[illegible] observed in ascending Mount Rigi and the range o[illegible] which form the north-east bank of the lake of Lucerne in Switzerland. H.H.S.

stone, under which embedded lay a thigh-bone five feet three inches long, quite perfect from the round head to the condyles, and altogether a most magnificent specimen. The diameter of the bone about the middle and its smallest cylinder is nearly six inches." According to Cuvier a thigh-bone five feet in length will require an elephant to be fourteen in height, a stature, Mr. Prinsep considers, greater than any Indian elephant in the present day attains.

"Thus are our eyes," continues the able secretary, "at once opening to an unexpected and most interesting object of geological research. Upon the first inspection of the fragments the question naturally arises, to what animal do they belong, and to what species? as it may be remembered that all the fossil mammalia discovered in the tertiary deposits of Europe and America, and even those brought away by Mr. Crawford from Ava, have been pronounced to belong to extinct species by the most competent authority, and generally on the unequivocal testimony of skeletons, nearly complete, if not perfect. It would be rather hazardous therefore to pronounce upon a single bone before us, that the Jubbulpur fossil elephant was an exception to the general rule; yet, upon comparing the specimen, side by side, with a recent skeleton in the Society's museum, it is impossible to discover any such distinction as should constitute a difference of species; it is in all respects of the Asiatic type of elephant, and can be confidently distinguished from the *elephas primigenius* of Cuvier, so common in Germany and throughout Asiatic Russia, which has itself been pronounced 'more different from the Indian species than the ass is from the horse, or the chacal from the wolf and fox'"*.

"I hope that further research will enable more experienced geologists to decide the question of the identity of the specimen with the existing species of elephant; for although it may thus lose in antiquity, it may perhaps . value, as an intervening link bet en the in . f our planet in two geological ods now . by so strong a barrier of dissimi anizations.

* Pidgeon's Fossil Remains.

In other quarters of Hindústan, geologists are not less active. Elsewhere I have noticed the valuable contributions made by Captain Smyth from the Jumna; and the discovery by Captain Cantley, in Upper Hindústan, of an oriental Herculaneum. This latter gentleman has been particularly fortunate. In the Sévélik hills near Subathoo, at the foot of the Himalayas, in company with Dr. Falconer, he has found such an immense quantity of fossil hippopotami, as well as bones of enormous extinct animals whose existence even was not known before, that instead of sending single bits to the museums of Calcutta and London, he announces the dispatch of *cart loads*, and in one of his letters says, that he has discovered animal remains enough to freight a small vessel! From his description we might almost conclude the substance of the hill to consist exclusively of osseous breccia*.

No. 7.

MEMORANDUM ON THE CAPABILITIES OF THE HUTTA DISTRICT FOR THE PRODUCTION OF RAW LAC AND HAUL DYE.

The system of making advances, as before noticed, for stick, or bysakee lac, is a bad one, and should be avoided

* Among these remains, the first *extinct* fossil ruminant animal has been discovered. Doctor Falconer and Captain Cantley have given to it the name of Sivatherium giganteum, from Siva, the Hindú god, and θηριον, bellua. It was discovered by them in the valley of the Markanda, in the Siválik branch of the sub-Himalayan mountains. This new and gigantic ruminant genus forms a most valuable accession to extinct zoology. This circumstance alone would give great interest to the discovery; but besides its enormous size, which surpasses the rhinoceros, the family of mammalia to which it belongs, with the forms of structure which it exhibits, render this animal one of the most remarkable of the past tenants of the globe, that have hitherto been detected in the more recent strata of the earth. The head of the fossil is in a remarkably perfect state. After much anxious labour the hard crystalline covering of stone which enveloped it was successfully removed, and the huge head now stands out with a couple of horns between the orbits, broken open only near their tips, and the nasal bones projected in a free arch high above the chaffron. All the molars on both sides the jaw are present and singularly perfect.

as long as *khooskhareed** bargains can be made among the folks of Bundlekund. As there is no factory of this valuable commodity at Hutta, I obtained from Manuk Bya, the most respectable urrutteea, or broker, I could find there, an estimate of the existing price of bysakee lac, and the charges incident on transmitting it to Mirzapore. The following is the memorandum which I made out at the time. (May, 1833.)

Memorandum on the capabilities of the Hutta division, for the production of raw lac. (May, 1833.)

Manuk Bya, of Hutta, says he can procure within one month fifty tangurs (1 ton 16 cwt. 56 lbs.) of Bysakee stick-lac in the vicinity of Hutta, Dummow, Hindoore, Bulleo, and Ubhana. The price at present is twenty-four Balashaee rupees† per tangur, or three máns of 100 Balashaee rupees to the seer, or 2 cwt. 16lbs. for £2 sterling.

Estimate of cost, and charges of one tangur, or three máns (of 100 Balashaee rupees to the seer) of stick-lac, deliverable at Mirzapore, viz.:—

		Rupees.
1 Tangur		24.0.0
CHARGES.		
Buffalo hire to Mirzapore on one tangur, say	3.12	
Government duty at Hutta	8	
Transit duty in the Independent States of Bogelkund, before reaching the Ganges river	1.0.0	5.4.0
		29.4.0

There may be some trifling charges omitted in this estimate, of which I am unable to procure any account. Hutta is about ten or twelve days' journey from the

* This term implies ready sale *i. e.* selling without contracting to furnish an article.

† The Balashaee rupee is an inferior currency to the India Company's rupee; the rate of exchange is usually about 109 or 110 of the former, to 100 Sonat rupees of the latter; about 1*s.* 8*d.* English.

Jumna, and fourteen from Mirzapore. In addition to its capabilities for furnishing lac, Hutta has long been celebrated for its red dye. The plant whence this colouring material is procured is called haul (*Moninga citrifolia*), and is very abundant throughout the southern parts of Bundlekund and the Hutta division. The chief merit of this dye is its cheapness and permanency; constant exposure to the burning rays of the Indian sun scarcely fades it. The well-known red kharooa cotton cloth receives its colour from the haul dye. I am not aware that the dyers of Europe possess any material that can yield a red so permanent, bright, and cheap as the haul does.

The water of the Hutta wells, especially the old town (Booda Hutta), is reckoned very superior for the purposes of dyeing cotton cloths; and hence the weavers of all the neighbouring towns bring their yarn to this place to be coloured. Three different shades are produced from the haul plant:—first, a bright red; second, a deep brick red; and third, a faint red. These shades are created by selecting roots of different ages. Those of a year's growth are deemed the best, and are used exclusively in the dyeing of those cottons which require a bright colour.

In June, 1832, the market price at Hutta for this article was as follows:—

	Rupees.
1st sort (roots of one year's growth, called kunnoo, meaning fine) per màn, of 100 Sicca weight	13.0.0
2nd sort	10.0.0
3rd do.	5.0.0

The kharooah cloth is dyed from the coarsest roots. This cloth is principally manufactured at a town called Kotra, belonging to the Nagonde Rajah. At Hutta the two trades are monopolized by one class. The Korees are not only weavers of cotton cloth, but dyers also of the dye. They are an industrious class of people; but the lower classes of them have the character of being profligate. Besides the dye procured from the haul roots, there is another called Laloo, or

Kosham kee rung, obtained from a shrub, the name of which I forget. This dye, however, is of no value, for it soon fades; and is merely used to give a pink colour to the drapery worn by females.

The cotton is cleaned and spun into yarn by the women; after which it is made over to the dyer and weaver. In the latter process the females again take a part. An account of the process adopted by the Hutta dyers may not be unacceptable to the reader. To every three pounds weight (1½ seer) of raw cotton thread allow three quarters of a pound (three chuttacks) of russee, which is an impure alkaline earth, and eight ounces (two chuttacks) of castor oil. The three articles being placed in a jar, water sufficient to drown the cotton, is to be poured on. The thread is allowed to steep in this mixture for twelve days; care, however, must be taken each day during this time to give it a good rubbing for an hour, in the mixture. The yarn is then removed, and made over to the washerman, who takes it to the river and gives it a good cleansing; after which it is spread on a bank to dry. The preparatory process is now considered completed, and the following day the yarn is submitted to the colouring-pan, which is prepared in the following manner. One pound weight (half seer) of haul roots coarsely powdered, with four ounces of alum, are put into a jar containing two quarts of cold well water, and into this the washed yarn is emerged, and allowed to rest for four days. At the expiration of that time the pan is placed on a fire, and the water made to boil for four hours; when the cotton is taken out it is slightly washed, and then dried. A fresh supply of haul and alum are prepared, and the yarns again placed in the jar, where they remain for a period of four days more, when they are taken out, boiled as before, then re-washed and dried. This process is repeated for the third time, when the dye is considered to be permanently fixed.

No. 8.

ON THE UTILITY OF A NATIONAL BANK IN INDIA.

THE transactions connected with the Mint afford me an opportunity for the introduction of a few remarks upon the monetary system of our Anglo-Indian Government.

Silver is the standard coin of the country, and is, of all the precious metals, the most cumbersome, perhaps, to manage. The money as it is received in payment of rents is locked up in the coffers of the numerous provincial treasuries, till a scarcity in one part, or a demand in another, calls for its removal. In consequence, parties of one and two companies, sometimes an entire wing of a regiment, are to be seen traversing the country at all seasons of the year, escorting treasure from place to place. Every sepoy on such occasions claims, and is allowed, an extra daily addition to his pay. The cost, therefore, which the conducting of this silver currency entails, is a heavy item in the accounts of the government, and an incalculable clog in all commercial transactions with the interior.

The precious metals have been for years past gradually disappearing from Hindústan, and are now so scarce, that, with *tangible property as security*, the native bankers insist on 12 per cent. for their money, and double this sum, when they have to make advances without it. At the same time, every one acquainted with the present state of Upper and Lower Hindústan, knows that it is by the introduction of capital alone, the development of those vast natural resources can be effected, which it is the earnest desire of every real friend of India to promote. The important question then arises, how is this to be remedied? and the ready answer is, by the establishment of a bank possessed of capital sufficient to place its stability beyond the reach of suspicion, with branches in all the great towns throughout the interior, to be conducted on sound and most approved banking principles. By means of a national firm of this description, an immediate addition

would be made to the free disposable capital of the country, and the transaction of all kinds of commercial proceedings be promoted by affording facilities for making payments in the most remote parts. A bank having a stored metallic capital could, by retaining a fourth to meet the daily demand, lend the remaining three-fourths to the agriculturist, manufacturer, or merchant, to invest in the promotion of the resources of the country, and by issuing notes to an amount corresponding to that of the bullion so expended, throw at once into the circulating medium of the country a capital equal in amount to the millions of specie stocked by the bank; or, in other words, by withdrawing the metallic capital, and giving paper instead, as payment for goods purchased, make the coin itself available *for the production* of such goods. By those whose private interests may run counter to the promotion of such valuable institutions, objections may be urged; but of the utility of banks, when conducted on sound principles, and possessed of adequate capital, in the performance of many of the more important functions of political economy, all will lend a ready assent. The experience of England, of Scotland, of the United States, of America, and in fact, of all civilized communities, bears the most decisive testimony to the signal service rendered by banks, in their capacity of borrowers and lenders of money*.

No. 9.

AN OUTLINE OF THE HINDÚ, MAHOMEDAN, AND BRITISH SYSTEMS OF LAND REVENUE IN INDIA.

When the empire of India was in the hands of the Hindús, land revenue was paid in certain proportions of

* Since the above remarks were written, a proposal to establish a Bank with a capital of £5,000,000 sterling, has been made conjointly by all the leading East India capitalists of London, Liverpool, Manchester, and Glasgow. No fewer than sixty-eight firms have given their support to the measure.

the produce, and not in specie; besides which, various other taxes were levied on different articles of luxury, in proportion to the consumption of each kind. Money, as it was received in exchange from foreign countries, for the richer produce of the country was absorbed by the priesthood and secreted in the temples, where it remained a useless deposit for many hundreds of years.

The Mahomedan conquerors of India pursued the same course, with this exception, that instead of a share in the produce they took an equivalent in specie, which now once more found its way out of the temples, and was so abundant as to appear inexhaustible. The treasure taken back to Persia from southern India by Nadir Shah has been by some estimated at thirty millions, but by others as high as two hundred and thirty millions of our money.

The enumeration of the articles belonging to one of the caravans travelling from Babylon to Palestine which was plundered by King Richard in 1191, will serve to give some idea of the nature of the oriental trade as conducted at that time by the way of the Persian Gulf. They consisted of a great quantity of gold and silver (which must have been bullion, as money is also mentioned), robes of silk, purple dye, a variety of ornaments for the person, arms, and weapons of various kinds; sewed coats of mail of the kind called gasinganz, embroidered cushions, sumptuous pavilions and tents; biscuit, wheat, barley, and flour; electuaries and other medicines; basins, bottles, bags, or perhaps purses ("scaccaria") silver pots and candlesticks, pepper, cinnamon, and other choice spices of various kinds, sugar and wax, and a prodigious quantity of money*.

The Mahomedans as soon as they had completed the conquest of India, divided themselves into distinct and independent sovereignties, and the country presented just such an appearance as Spain did under the Moors. The tastes and feelings of the victors led them to call into exercise the mental and physical abilities of the people upon objects of convenience and luxury. Their inclinations and tastes differed in different provinces,

* Macpherson.

but every one more or less contributed to this kind of employment. In the province of Bengal a preference was given to foreign and domestic articles of luxury, in others a greater disposition was shown for useful or ornamental works, such as spacious tanks, caravansaries, sacred edifices, fortifications, and plantations, which after the lapse of centuries still bespeak the stupendous scale of magnificence on which they were undertaken, and to this day call for the praise and admiration of all classes. Their private wealth was usually expended on the spot where it had been acquired, and though severity and oppression might have been exercised in the accumulation, yet by its quick circulation through the many channels of luxury, the country at large was improved and embellished without any decrease of the general currency.

The Mahomedan invasion of southern India happened in the thirteenth century, and at the commencement of the eighteenth century Aurungzebe invaded and desolated all the sovereignties which his predecessors had set up, throwing the entire empire into one scene of anarchy and confusion. Aurungzebe died in 1707. During the civil wars which occurred after his death, the Mahratta power gradually rose, and contemporaneously with it that of our own. "We flatter ourselves," says an able writer on Indian affairs, "with having conquered India; we have only been the most successful competitors for dominion where all dominion had ceased; and have merely employed ourselves in collecting the scattered fragments of a general wreck."

The ancient Hindú people possessed an hereditary right in the soil. Of this there can be no doubt. Colonel Wilks and others have satisfactorily proved it. Moreover, the law of Menu expressly points to such a right: "Cultivated land is," according to that authority, "to be the property of him who cuts away the wood, or who first cleared and tilled it."

Their Mahomedan invaders, however, applied the principles of the Koran and the celebrated law work called the *Hedaya* in the adjustment of their financial system. They accordingly *asserted a proprietary right*

to all conquered lands, and fixed that one-half the gross produce of the soil should be the just tribute or tax to be paid by their infidel cultivators. In 1762 the India Company obtained their Firman or Royal Charter from the Emperor of Delhi.

"When the British power," says Mr. Rickards, "supplanted that of the Mahomedans in Bengal, we did not, it is true, adopt the sanguinary part of their creed; but from the impure fountain of their financial system did we, to our shame, claim the inheritance of a right to seize upon half the gross produce of the land as a tax; and wherever our arms have since triumphed, we have invariably proclaimed this savage right; coupling it at the same time with the senseless doctrine of the proprietary right to these lands being also vested in the sovereign in virtue of the right of conquest."

The Royal Charter of the Moghul styles the Company "our faithful servants and sincere well-wishers, worthy of our Royal Favours, the English Company," and confers on them the office of Dewan, or Principal Financial Minister and Chief Justice in Civil Causes. So that for some time after the India Company 'took office' under the Emperor they did nothing to derange the existing order of things, but retained the same subordinates, and let the lands to the same contractors and farmers as in former times.

After the Company had obtained possession of the province, by consenting to give the Emperor a money grant of £250,000 per annum, these usages were persevered in and continued to be exercised up to the period of the declaration of the celebrated permanent settlement system by the Marquis Cornwallis, on the 22nd March, 1793.

By this settlement all lands in the divisions of Bengal, Bahar, and Orissa, were divided into estates and parcelled out *in absolute right* to the Zumeendars, who were thus raised, from their former state of hereditary collectors or farmers of revenue, to figure in future as "a landed aristocracy."

In the division of the produce of these estates it was decided, or rather estimated, that after deducting the

expense of collection, one-half, or two-fifths, would be left, as before, to the Ryot, or working farmer; while of the remaining half, or three-fifths, which constituted the rent of the estate, ten-elevenths were taken by the government as a tax, and one-eleventh left to the Zumeendars.

As this territorial assessment was fixed never to be increased, so, on the other hand, remissions were declared to be totally inadmissible.

To each estate there were attached certain portions of waste or uncultivated lands; and as the assessment was declared to be the *utmost leviable* from the whole estate, any benefit which the revenue farmer or Zumeendar could derive from the future cultivation of his wastes, would of course be his own. With this new system came also a code of laws. The collectors of revenue, who had now become Europeans in the service of the Company, were empowered to proceed against the Zumeendars by a summary process; that is, in default of payment, by imprisonment and confiscation. The following year, 1794, this law was modified. The landholders were exempted from imprisonment, but the rule for recovering arrears of revenue was rendered still more rigid. The European collector, on failure of any one *monthly* instalment, could bring the estate to sale immediately, instead of waiting, as before, till the end of the year. This had the effect of crowding the Calcutta Gazette with advertisements of the sale of confiscated property. In a very few years the newly raised revenue farmers, many of them of ancient families in the province, and highly respected as hereditary collectors, were swept from the face of the country. The lands fell into the hands of the Calcutta merchants and others, and thus another "landed aristocracy," as Mr. Rickards facetiously terms them, sprung up; among whom were a set of greedy adventurers, whose object was to extract from the takers all that could be realized in the shape of gain. By the terms of the permanent settlement, Zumeendars have the power of granting under-tenures in perpetuity, called Putnee Talooks. A tenure which does not revert to them in default of pay-

ment of rent, but is brought to the hammer like all other property.

Although there is no clause which specially invests the Zumeendars in the fee-simple of the land, yet these collateral powers, particularly the last one, clearly points to this *verba non scripta;* else how can a Zumeendar exercise the power of under-letting in perpetuity, unless he has the right first ceded to him? Indeed, this feeling is now become so general, that I believe no authority would attempt to upset it. As long therefore as a man fulfills his engagement of paying the sum stipulated, the land remains in his possession. It is only in default of payment that the estate can ever again revert to the Company. It was no doubt from the best and most [illegible] motives that Lord Cornwallis was actuated to undertake such an important fiscal change; but how far he was justified in so doing, considering his necessarily imperfect knowledge of existing rights, and inability to control the colonial privileges of the mother-country, is a question of serious magnitude. Moreover, by fixing the land rent in perpetuity, he fixed bounds to the demands of the state, whatever the future extent of the public exigencies might be.

This arrangement, however, has not had the effect which its advocates expected, namely, the formation of a respectable middle class of society; while, on the other hand, one of the greatest objections to it is, that it provides for no change in the value of landed property, which in Lower Hindústan is become considerably deteriorated in value. A Zumeendar must therefore now pay a ruinous rent, or submit to be turned with his family on the stream. This has in part been brought about by the commercial advantages possessed by England.

At present no duty whatever is levied upon the imports into Bengal, of British hardware, metals, and woollens, and only 2½ per cent. on British cottons; while at the same time, the agricultural returns from thence are taxed with oppressive duties. The consequence is that the India manufacturer has been undersold in his own bazaar, and ruined. The town of Dacca, for example,

—formerly full of weavers—has now barely a dozen looms at work, and the population has fallen off a sixth part. The master being no longer able to pay his people, of course discharged them. Every woman, who earned an honest livelihood by spinning cotton at her cottage door, has been compelled to abandon her wheel and sit idle, or mispend her time in the indulgence of those vicious practices which want of employment is sure to engender. The men, driven by necessity, are forced to the plough, and can only obtain a livelihood by taking their wages in kind. The little capital which remains in the country is employed in the indigo and opium trade*; and, as the Government will only be paid their rents in specie, the farmers are driven to all sorts of shifts to meet the revenue demands. Eleven-twelfths of the population are agriculturists, consequently all are sellers. At this present time, Bengal, and, indeed, the whole of Hindústan, presents the singularly anomalous picture of a country destitute in the midst of plenty.

Then, again, the subletting system has added not a little to aggravate this deplorable condition of things. "A proposal was made," writes the 'Friend of India,' "some time since, or rather a wish expressed, to domesticate the art of caricaturing in India. Here is a fine subject. We would ask the artist's aid to draw, first, the lean and emaciated Ryot (or working farmer) scratching the earth at the tail of a plough, drawn by two half-starved, bare-ribbed bullocks. Upon his back we would place the more robust Seeputneedar, and upon his shoulders the Durputneedar; he, again, should sustain the well-fed Putneedar; and, seated upon his shoulders, should be represented, to crown the scene, the big Zumeendar, that compound of milk, sugar, and clarified butter." And this would be but a true picture. The Putnee Talooks, or subletting, extends from the

* The indigo produce of 1835, was calculated at one lac and ten thousand mauns (maun 84lbs.), which at 100 rupees, average cost of production, will require a capital of one crore and ten lacs of rupees (£1,100,000). The opium trade employs at least 50 lacs (£500,000).—Calcutta Paper, "Friend of India."

Zumeendar to the Putneedar, from the Putneedar to the Durputneedar, and from him to the Seeputneedar. The poor Ryot pays for all! He is of course almost always in debt, and has therefore a most exorbitant interest to provide for, his monied friend the banker cheating him in proportion to his poverty. What with the rent for his land, the exactions of the Zumeendar, fees to his servants, and the usury of the money lender (for no money can be borrowed for less than 24 per cent. by him), the condition of the wretched cultivator of the soil in India is almost insupportable, and can be better imagined than expressed. He has neither present enjoyment nor the hope of future relief. "Every note of the instrument," observes the authority just quoted, "is out of tune, and the most skilful artist can produce no harmony from its discordant tones."

Our revenue arrangements in Upper Hindústan have proved equally unfortunate in effecting any improvement in the political condition of the people, who, if possible, are more miserable than their brethren in the Lower Country. Lord Cornwallis's permanent fiscal settlement is confined to the provinces of Bengal and Benares. Throughout the whole of Central India, and the north and north-western provinces, the soil is exclusively held by the Government, and granted by them on leases, varying from three to fifteen years, to the highest bidder. Having already glanced at the ruinous consequences of this mode of procedure, in another part of the work, I need not detain the reader long; a little further insight into the subject, however, may not prove uninstructive.

The wages of agricultural labour throughout Central India are paid in kind, as in Lower Hindústan, and are nearly the same throughout all parts. The corn rents are pretty uniform from lands of the same natural fertility; but money rents, from lands of the same quality, vary according to the distance from the market or seat of demand for this produce, in a manner quite incredible to those who have had no opportunity of personal observation. We have few emporia in Upper Hin-

dústan. Those which did escape the ravages of the civil wars the Mahrattas in great part destroyed; and we have all but completed the work by our colonial and commercial measures. In Central India the system admits of no riding on the shoulders of each other, as in the case of the permanent settlement provinces. The Hindû farmer who takes the village, toils with the plough in common with his people; and yet he never grows rich. This may be accounted for on the most satisfactory principles. On a portion of territory coming into our possession, the practice has hitherto been to make a settlement with the farmers for a period of years, *calculated on the average money rents paid to the former government for a certain number of years preceding the transfer.* At the first blush nothing appears fairer than this: the scheme seems to be just between man and man: reflection, however, soon discovers its fallacy.

In the first place, the lands so obtained are for the most part border-lands, and have had on them, for the protection of the country, a large frontier establishment, affording a steady market for the agricultural produce of the neighbourhood. The soil of the fields, which in India are never manured, have been giving annually exhausting crops of corn, and are now fast approaching to decay: instead, therefore, of continuing to yield returns fifteen or twenty-fold, which they were capable of doing when first taken in from fallow, they have been dropping off to ten, eight, seven, or six-fold—perhaps as low as four-fold. The money rent, however, is rated on a calculation of the best years of produce; and therefore is evidently established on wrong and exorbitant data.

Secondly:—No sooner is the revenue settlement made with the farmers, and the country reported to be *tranquil*, than, acting on the principle of all profit and no loss, an imperative order is issued by the British authorities, directing "all extra establishments to be paid up and discharged;" *in order that the local expenditure may be reduced to the lowest possible scale*, or the regular troops being thought more neces-

sary within the territory reserved by the native state, are marched there accordingly, and the old quarters broken up. The reserved territory into which our military establishments are now removed, improves rapidly in its resources. Tillage is extended, stock augmented, and the population increased. Not only do the money rents paid by the farmers and cultivators to their prince (for they fortunately have no absentees) come back to them again in exchange for their produce, but also that which is collected by us in the newly ceded lands, which is now sent to pay our own establishments situated amongst them. Over and over again have I seen waggon loads of money sent off from the Saugor treasury to Holkar's country, to pay the Company's military force at Mhow; and the same occurs with respect to Neemuich, Nagpore, and Rajpootanah. Neither the prince nor his officers can anticipate our intentions; and therefore are unable at once to bring the advantages which these alterations produce on their lands, to bear in their settlement with their farmers. All the adventitious value, therefore, given to the new land by these changes, go for the time to enrich the farmer and the cultivator. At the expiration of existing leases the prince, of course, shares liberally in the advantages, and sometimes finds that instead of sustaining a pecuniary loss, he has, by the new arrangements, made a positive gain. In the Saugor and Nerbudda territories the effects of disbanding, reducing, and removing public establishments were so appalling, that in a few years the farmers, with the whole produce of their lands, could scarcely pay the rent, which, before these establishments were taken away, they had cheerfully undertaken to do. While, on the other hand, the farmers of the reserved territory, into which our force had been marched, could pay theirs from the sale of their *chaff* alone! Our farmers, finding no market left at which they could exchange their surplus produce for cash, were unable to pay money to the state. Government, however, would take nothing but money in payment of their rents; and the farmers, not being able to transport their produce to the new

seat of demand, for want of roads and efficiency of capital, applied for a remission of their rents, but were peremptorily refused. They then declared their inability to pay money, but offered, instead, their corn or whatever else they possessed. This was rejected, and the consequence was, they were declared defaulters, and the legal screw was made to exert its pressing influence on the poor sufferers by attaching their ploughs and bullocks, with their wives' trinkets, which were sold for whatever they might fetch.

After this, should they still be found in arrears, they were thrown into gaol, and their families left to procure subsistence in the best manner they could. Did they manage to escape the latter evil, they immediately deserted to other countries, and took with them the residue of their little movables which they still retained. At length the wretchedness became so universal that it was found impossible to continue the grinding system any longer, and the Government have latterly been as lavish in their liberality as before they were inexorable in their exactions. The relief, however, has come too late. Many beautiful fertile tracts have become depopulated and converted into irreclaimable jungle. At this moment, throughout the whole of Central India, and, I believe, the northern provinces as well, but of Central India I can speak positively, there are outstanding balances against the farmers to the amount of many thousands of pounds. Of this amount there is not the remotest possible chance of any part being recovered, or, indeed, of the condition of the rural population being improved, unless the Government should consent to the infusion of capital among them, by bringing back the public establishments it found when coming into possession of the country, or, by increasing in some other shape the local expenditure, or by placing its revenue assessments on an entirely new footing to what they are at present.

When this is done, we may hope to see the condition of the agricultural classes of India improved; but I fear the irresistible demand for tribute to satisfy the cravings of the Home Treasury will never admit of much being

expended directly in the furtherance of these necessitous objects. The only hope appears to rest in the possibility of private enterprise stepping in to their rescue. Should the Indian Government secure to the monied interest of England such advantages as will induce them to come forward with a supply of capital, we may expect to see the condition of India improved; and whether the development of her vast resources be promoted by the establishment of a bank, or the incorporation of an Agricultural Company, is perhaps not so much a matter of moment as the urgency of their co-operation for the establishment of some such acts of enterprise.

No. 10.

TRIAL BY ORDEAL.

DIFFERENT forms of trial by ordeal are still adopted by the people of India in the adjustment of their differences, or in the detection of crime. The one most commonly in use is the ordeal of rice-chewing.

The intimate control which the mind exercises over the involuntary functions of the animal body is too well known to require repetition in this place. The fact was too apparent to escape the observant eye of our immortal bard, who bodies forth his knowledge of it by putting into the mouth of Henry the Eighth the following ironical expression, in reply to Wolsey's defence from the charge of disloyalty:—

> "'Tis nobly spoken!
> Take notice, lords, he has a loyal breast,
> For you have seen him open 't. Read o'er this;
> [*Giving Wolsey papers.*]
> And, after, this; *and then to breakfast with*
> *What appetite you have.*"

An instance of the powerful effect of fear operating on the human frame, even to the destruction of life itself, has been detailed already when alluding to the

national character of the Hindú people, and in further corroboration of the truth of the assertion we have the trial by ordeal with rice.

This practice is general throughout every part of Hindústan, being the test most commonly adopted by the Anglo-Indian community, whenever any article of value is missing. A short description, therefore, of the ceremony may be found interesting.

As soon as the loss of a silver spoon, or other article, has been discovered, and every member of the establishment, on being questioned, strictly denies all knowledge of the circumstance, a Brahmin is sent for, and desired to put the domestics through the trial. For this purpose he summonses the whole of the household, who usually number from 15 to 20, and desires them to sit round him in the form of a circle. With great solemnity he draws forth a small pair of brass scales, and in the most careful manner unwraps from its paper envelope an ancient rupee of rare and peculiar coinage. This piece of money he puts into the scale, and then poises it with an equal weight of dry clean rice. To each individual he portions out a modicum, which is to be taken into the mouth and chewed. When the process of mastication is supposed to have been perfected, the Brahmin directs each person to show the effects of his attempts, and by this means detects the thief; for when every one else has completed his task the rice of the culprit is as entire as when he first received it.

The explanation is easy: the apprehension occasioned in the mind of the delinquent influences the nervous system to so great a degree as to occasion the total suppression of the salivary discharge, and consequently the dry grains of rice requiring an abundance of this fluid for its successful mastication, the aggressor is utterly unable to effect his object, and the corn is returned imperfectly deliquated. Probably before the commencement of the ceremony certain movements have betrayed the uneasiness of the culprit; and the Brahmin, being generally a shrewd fellow, does not fail to take advantage of these premonitory indications, and assists very materially in heightening the discomfort of the

guilty party by keeping the most vigilant watch on his actions. The evidence being now considered conclusive in the minds of all assembled, the unsuccessful candidate is led forth, and probably, before any punishment can be inflicted, he is induced, with the hope of obtaining a mitigation, to confess the robbery, and point to the place in which the property has been concealed.

THE END.

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